THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

THE VALUATION OF PRIVATE PROPERTY FOR PUBLIC USES

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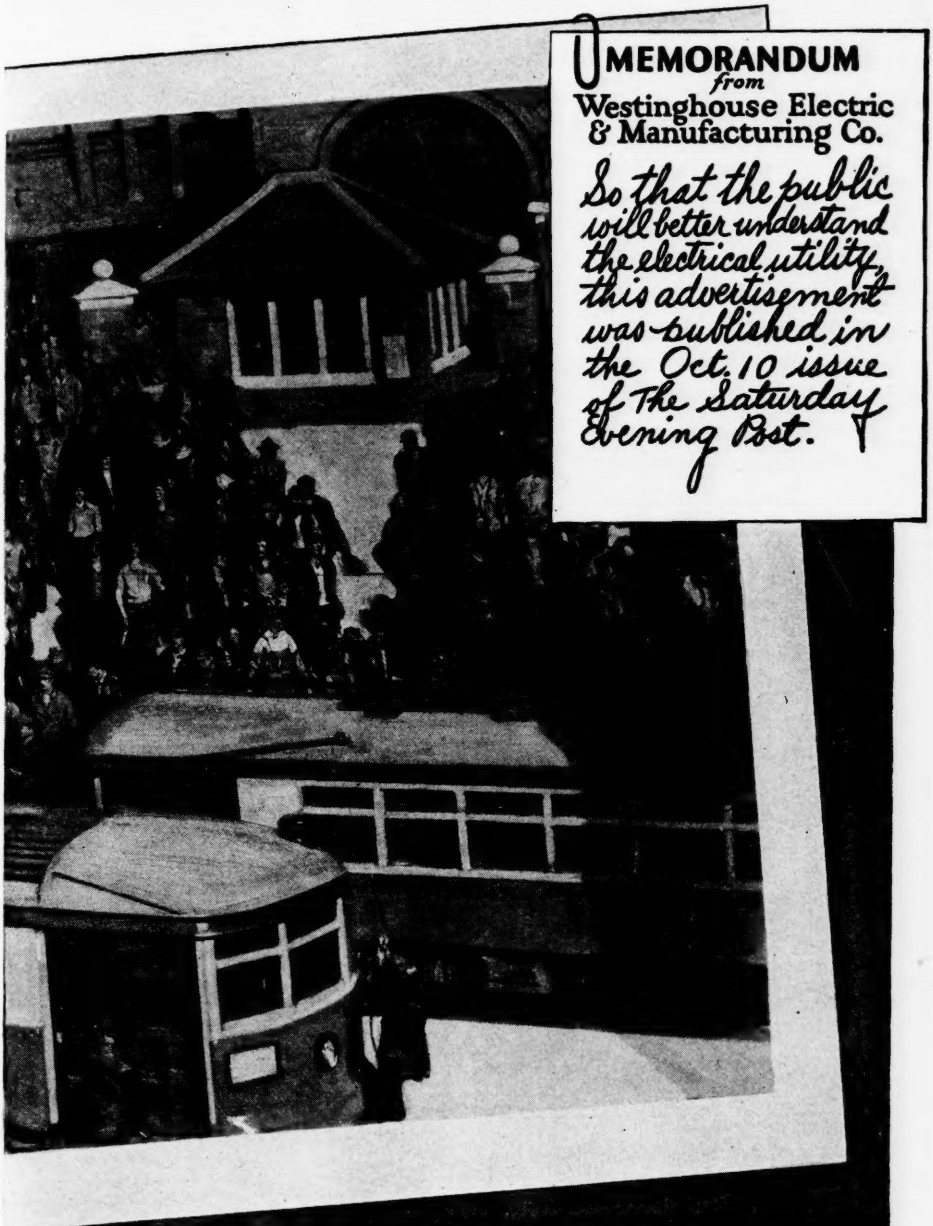
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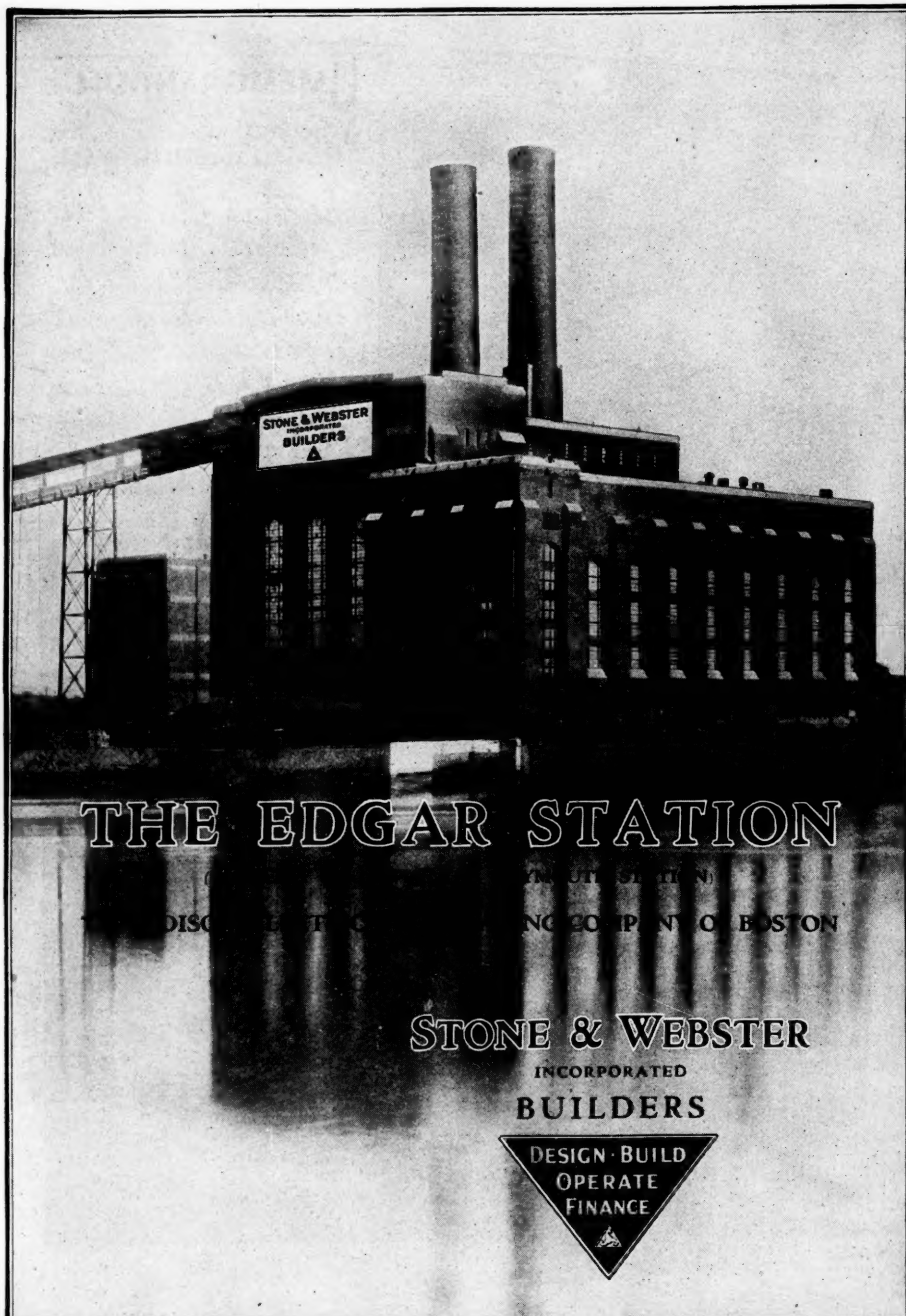
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THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS

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JANUARY 1926

VOLUME II NUMBER 1

SOME ASPECTS OF THE VALUATION OF PRIVATE PROPERTY FOR PUBLIC USES

By WILLIAM L. RANSOM[1]

ONE of the many challenges which the post-war period has brought to the law and to public administration comes from the increased necessity for valuing private property devoted to public use.[2] There was a time, not many years ago, when the direct processes of negotiation and sale embodied the common method of ascertaining the value of private property taken for public purposes. If a municipality wished to acquire a water system or other property under private ownership, its representatives commonly sat around a table with representatives of the owners, canvassed the facts, and finally made a business man's agreement as to price. The *taking* of the property

[1]Editorial Note: This is the first of two articles by Judge Ransom on the subject of public utility valuation. The second article, which will appear in the next issue of the Journal, discusses improvements in the procedure and point of view of valuation.

[2]Although this article has not been prepared for the purpose of making a special plea or argument, its trend and tenor may be deemed such that I ought to say a prefatory word by way of confession or warning: I have had the opportunity of dealing with questions of valuation from several angles of public and private relationship. At the present time, I am dealing with them, day by day, as counsel for the owners of important properties. This is a field in which principles of economics and public policy have been mixed inextricably with law—a field in which I have always believed that no one has a private interest which is opposed to the public interest, if both are soundly conceived. My contentions in behalf of clients are presented before courts and commissions, and nowhere else; I would not intentionally use the pages of the Journal to support any contentions which seemed to me at variance with a sound development of the law, procedure, and public policy on this subject. At the same time, I realize that I am never far from the atmosphere of advocacy and argument as to these topics, and I may not have that detached point of view and balanced judgment which should characterize the publications of this Institute. So I discuss this subject with some diffidence, and undertake no more than to present certain practical aspects of the matter for consideration. Any views expressed in this article are my own, and not those of any client or organization.

was direct, physical, and complete; and even when the minds of buyer and seller failed to meet on a sum to be paid by agreement, the resultant valuation in condemnation proceedings was concerned with the sum to be paid as compensation for a direct and physical taking over of the property by the government itself, to be used thereafter in fulfilling what were deemed to be governmental functions.

The instances in which private property was thus acquired by governmental agencies were not numerous; the instances in which such acquisition involved a judicial ascertainment of value, in lieu of negotiation and agreement on purchase price, were still fewer; and the scope of governmental activities was such that only a few types of projects and properties were thus subjected to involuntary, but direct and physical, appropriation for public ends.

Parenthetically, it may be pointed out that the circumstances of such direct and physical takings of going private plants gave obvious pertinence to certain factors affecting or controlling the price to be paid, whether determined through negotiation or judicial proceedings:

1. A municipality wished to own and operate, for example, a system of water supply within its limits. What could the municipality afford to pay for the existing plant and distribution system? At least what it would cost the municipality, at the time of the taking over, to build a like property and develop it to like efficiency as an operating concern.

2. If an individual or a corporation owned a productive property and it was to be taken outright for public uses, law and constitutional right ran parallel with common sense in determining that the value placed upon property of a private owner could not be made to depend on *when he bought or built it or how much it cost him,* unless, perchance, he built or bought it so recently as to give rise to presumptions that its cost would be about the same at the time of the public taking. The thing for which compensation had to be determined and paid was the *property,* not the investment, and the value sought was the equivalent of the property *at the time of the taking,* not its cost at some earlier date.

3. Down to 1914, the trend of costs showed no sharp variation upward, so that the replacement cost of the physical property in an existing plant could often be estimated to be, if anything, a little less than the actual original investment. A governmental entity could well afford to pay for an existing property the cost of building one which would give neither better nor worse service than the existing property; but the computations as to the replacement cost of such a plant were almost always introduced into the proceedings by the representatives of the public, who sought a weapon to compel sale at less than the actual investment.

Many of the legal and economic concepts of valuation thus had their origin in determinations as to the sums to be paid for "takings" which were direct, physical, and complete.

The Newer Forms of "Taking" Private Property for Public Use

Even before the World War, the broadening scope of governmental activities and acquisitions had become a capital fact, and there had also arisen a multiplying number of instances in which private property was effectually *taken* for public uses, without any transfer of title or change in possession. In fact, this development of an indirect, intangible taking, without disturbance

of ownership, has been deemed a characteristic outgrowth of the American concept of the relationship of government to industry. Private ownership and operation, under plenary regulation and control by public agencies, have generally been deemed preferable to governmental acquisition and operation; and the political ascendancy has remained in the hands of those who *accomplish* no wholesale superseding of private with public ownership and operation.

During the World War, the government multiplied greatly the number and the kinds of industries which it directly operated, and multiplied still more the industries which it regulated and controlled. What was done in that emergency has never been wholly undone. Private property in a widening number of industries has been stamped as affected with a public interest and has been conscripted for public uses; regulation and supervision have been pushed over into new fields and at times into unheralded extremes; but the forms of private ownership have generally remained undisturbed, and counsel for the private owners have been left to devise expedients to insure that these new and intangible takings shall not inflict confiscation.

New and Unexpected Analogies on Valuation Problems

One can readily make one's own list of the industries into which the long arm of government has recently gone in some of our states, in the form of state and municipal control of rates, rents, and prices. This has brought some novel problems of valuation, and has thrown new and unexpected light on old problems. To illustrate: A great many thoughtful people were nearly or quite convinced that railway companies should accept and be satisfied with a fair return upon the amount of the actual investment in their properties. Persuasive arguments of relative convenience and public policy were erected to justify the extension of this concept to all private property devoted to the public service. The progress which this principle seemed to be making toward considerable public acceptance was somewhat interrupted when the doctrine of *Munn* v. *Illinois*[3] was extended to ordinary residential property by "reasonable rent" laws, operative first in the emergency due to war but continued and upheld as within legislative discretion in times of peace.[4]

In New York State, under Chapter 944 of the Laws of 1920, the ordinary rights of the landlord as to a tenant remaining in possession after the expiration of his lease were and are still suspended, and the landlord is given the right to bring an action to recover *a fair and reasonable rent* for the premises while in the possession of the tenant.

The Ascertainment of Present Value Under the "Rent Laws"

Determination of the number of dollars which shall represent a "fair and reasonable rent" for a piece of residential real estate, under private ownership, requires a determination as to the reasonable operating expenses and also as to the sum on which the owner of the property shall be allowed to earn a return, just as determination of a fair and reasonable rate for electricity involves a determination as to the company's reasonable operating expenses

[3] 94 U. S. 113.

[4] *Block* v. *Hirsh*, 256 U. S. 135; *Marcus Brown Co.* v. *Feldman*, 256 U. S. 170; *Willson* v. *McDonnell*, 265 Fed. 432; 257 U. S. 665.

and as to the amount, in dollars, which shall be taken as the value of the property used in furnishing that service, and, therefore, as the sum on which the revenues shall yield a fair return, over and above operating expenses.

The analogy between the rent laws and rate regulations lies further in the fact that the rent laws regulate the *rates or payments* to be made for the use of a species of property historically regarded as private and free from rate-regulatory intrusion. The analogy is made still closer by the fact that the rent laws were in part predicated and upheld on the ground of the *absence of competitive conditions.* For example, Chapter 136 of the Laws of 1920 in New York State, commonly referred to as its Emergency Housing Act, recited as a basis for its enactment the "stress of prevailing conditions whereby the *freedom of contract has been impaired.*"

So the computation of "fair and reasonable *rents*" for residential properties brought to the courts a whole new flock of valuation problems. I may refer briefly and illustratively to some of these, because it has seemed to me that a good many of the difficulties which have appeared to surround the valuation of railway and public utility properties have been due to the "atmosphere" which has been developed by political agitation and political sophistry about them, and that a clearer understanding can be gained if illustrations are taken from other types of property, whether or not devoted to public uses.

If Mr. X owns today a well-maintained apartment house which it cost some one $1,000,000 to build in 1916, but for which Mr. X paid $2,000,000 in 1919, who would suggest that the present value of the building is, of necessity, either $1,000,000 or $2,000,000. Let us take illustratively, under the rent laws, two apartment houses of *like construction, location, and capacity:*

	House A	House B
Year built	1916	1923
Cost to build (including preparation of plans, construction supervision, financing of first mortgage and other loans, interest and taxes during construction, and so forth)	$1,000,000	$1,750,000
Cost of advertising, commissions and concessions to secure tenants, vacancies after construction and before normal renting, and so forth	100,000	175,000
Builder sold the property for	1,200,000	1,950,000
Present owner paid for the property	1,750,000	2,000,000
Present replacement cost of the property	2,225,000	2,225,000

Is each landlord to be allowed a return on no more than the original cost of his property; namely, on $1,000,000, as to House A, and on $1,750,000, as to House B? Or is the owner of House A to get a return on the $1,750,000 he paid for the property, and is the owner of House B to get a return on the $2,000,000 he paid for that building, although the two buildings possess like capacity and would cost equal sums to replace? Were the tenants of House A and of House B to pay widely different rentals, because of fortuitous circumstances of different dates of purchase by present owners or different dates of original construction? Were the owners of the two houses to be compelled to let like apartments for widely different rentals, because of any such circumstances; or was each owner to be held entitled to charge rentals yielding to him, over and above operating expenses, a fair return on the *present value* of his building—a present value determined from all pertinent factors, but with proper weight to be given to the fact, in valuing House A and House

B, that neither could be reproduced today for less than $2,225,000?

At least at this juncture, I am not arguing as to what bases of valuation should have been adopted, in determining the values of the properties owned by our very numerous landlords. I am pointing out that the whole subject seemed to take on new and unexplored aspects when related to private property other than that of a railway, gas, or electric corporation. The need for valuing land and buildings under a new and intangible "taking" brought a sharp challenge to both the "original cost" and the "actual investment" theories of valuation.

It was at first urged, as it has always been urged with respect to public utilities, that each landlord should be allowed to earn on the original cost to build his property, but no more, irrespective of what he paid for the property. This was deemed to produce shocking inequalities between landlords. Judge Guy, in the First Department Appellate Term (New York), said that the landlord was to be allowed a return on *his* actual investment, and that proof of present market value or present replacement cost was incompetent.[5] This was deemed to produce unjust discrimination between landlords, and to make their rents and revenues depend on fortuitous circumstances as to dates of purchase. This standard was also denounced by tenants' organizations as fastening upon them the high prices paid for residential properties, during the housing emergency. Judge Kelby, in the Second Department Appellate Term, then held that the landlord was entitled to charge rents yielding a return upon the full present value of his property,[6] and this seems to reflect the present state of the law. Proof of present replacement cost is often introduced to support a claim that the landlord is not entitled to a return on the inflated and excessive price he paid for the building.

I think it is not too much to say that the new angles and aspects revealed by the valuation questions arising under the "rent laws" did more than anything else to create a popular conviction that the "original cost" theory of valuing private property taken for public uses is inconsistent with the American concepts of fair play and equality of treatment and the American concepts as to the rights of the owners of private property, even when such property is devoted to public service and subjected to public regulation.

What was "sauce" for the public service corporations could not be made "sauce" for the landlords, unless the prevailing sense of fair play and property rights was to be infringed. In this new aspect it became clear to many that the "original cost theory" did not meet the practical situation under the Fourteenth Amendment, if adopted in peacetime valuations of residential properties subjected to public restraints as to reasonableness of rents.

As was frankly admitted in the *Harvard Law Review*[7] by one of the persistent champions of the investment theory of valuation:

> In such cases, the official rent must not be so low as to be confiscatory and to deprive the owner of the use of his property without due process of law; but if the value of the property were to be based on what the owner has paid for it or invested in it, rather than on its present value, many of the ordinary elements in the value of real estate would

[5] *Hall Realty Co.* v. *Moos*, 115 Misc. 506.

[6] *Hirsch* v. *Weiner*, 116 Misc. 312.

[7] Matthews, Nathan, "The Effect of the Recent Decisions of the Supreme Court on Reproduction Cost as a Test of Value," *Harvard Law Review*, Vol. XXXVII, February, 1924, p. 431.

in effect be confiscated. If the profitable use of real estate and other forms of ordinary property is to be perpetually subject to every kind of public regulation, it is obvious that the only protection of the citizen is his right to a reasonable return upon the value of his property, as hitherto understood, at the time of interference.

Present Costs and Conditions as Factors in Present Value

It is often pointed out that the eras of rising and falling values, measured in the purchasing power of the dollar, are quite marked in their regularity, with something of a definite trend upward because of higher standards of living and, therefore, increased cost of the labor element entering into all tasks of manufacture and distribution. It is said, with a great deal of earnestness and reason, that, in the field of public utility valuation, there ought to be some way of getting an average basis which will be just to the consumer as well as to the investor, and that such an equitable basis necessarily requires that, in a time of marked decline in values, the utility shall be protected in a constitutional right to earn a return at the current rate upon no less than the amount of its prudent actual investment in the property which it owns and devotes to the public service. In return for this assurance of earnings at the current rate upon at least the amount it has prudently put into the property and made the basis for the issuance of securities sold to the public, it is said that the utility ought to forego all or some of its right otherwise to earn upon its present properties measured by present construction costs, wages, and prices affecting value.

In a subsequent article, I shall try to show concretely some needed improvements in procedure and point of view upon this subject. In the present article, the editors of the JOURNAL have asked me to review some of the practical considerations which have led to the establishment of the "present value" concept in determining the sums on which a return may be earned, by the owners of private property devoted to the furnishing of essential public services. There would seem no appropriateness in undertaking herein a detailed analysis of the decided cases, but it may be helpful to the ensuing discussion if I first outline my personal view as to the present state of the law of the subject:

1. *Value* must be paid if private property is physically taken, and a return must be paid upon the *value* of property devoted to public uses but remaining under private ownership.
2. Such *value* must be ascertained as of the time of the "taking" of the property.
3. Public utility property is "taken" if and when its owners are denied the right to charge rates yielding a fair return upon its *value at the time of its use in the public service.*
4. *Value* at the time of such use is not controlled by any artificial rules or formulas; any facts relevant to its ascertainment in the particular case must be given reasonable and reasoned consideration; but *value* at the time of inquiry is not measured or determined by *cost* at the time of original purchase or construction; "reproduction value is not a matter of outlay, but of estimate, and . . . . proof of actual expenditures originally made, while it would be helpful, is not indispensable." [8]
5. If the property has not an ascertainable market value (a contemporaneous sale price established under circumstances which make it a fair criterion of the present worth of the *property*), "other evidence is resorted to," and "cost of reproduction at the date of valuation"

[8] *Ohio Utilities Co. v. Public Utilities Commission of Ohio,* 267 U. S. 359.

has come to be recognized as the starting point and most influential factor in giving "due regard to construction costs, conditions, wages, and prices affecting value"[9] at the date of the inquiry.

It seems to be the present concept that the sum produced by taking the present property at present wages, prices, and construction costs need not necessarily be accepted and found as the mathematical measure or equivalent of present value. The application of factors to determine present worth is still left as a matter of fair and competent judgment, provided current factors are given due and substantial consideration. The extent to which "construction costs, conditions, wages, and prices affecting value" at the particular date may be departed from and either diminished or increased by virtue of other factors, has not been prescribed by judicial rule, and may continue to depend upon the facts of the particular case, so long as there actually are shown to be relevant factors which warrant departure from the figure produced by present wages, prices, and costs, and so long as a reasoned judgment is exercised upon *all* of the factors, in a fair and not an arbitrary way.

The fact that, in the absence of sales prices and ascertainable market value, the value of tangible or intangible property cannot be determined with mathematical accuracy, or, indeed, that it is difficult to determine it at all, will not be recognized by courts or lawyers as a reason for denying to the owners of "taken" property a return upon only its original cost. The lack of a mathematical formula is a historic difficulty encountered by courts and counsel, in almost every action to recover damages for breach of contract.[10]

[9] *Standard Oil Co.* v. *Southern Pacific Co.*, 268 U. S. 146.

It may be noted that in the above outline I have cited and quoted only the two decisions of the United States Supreme Court which are, at this date (November 21, 1925), its two latest pronouncements as to the ascertainment of the value of tangible and intangible property. In the Southern Pacific Company case, the court said that "the original cost of the vessel was not useful as a guide to her value," and quoted the old saying that "The worth of a thing is the price it will bring." The court added, however, the legal axiom that: "Where there is no market value such as is established by contemporaneous sales of like property in the way of ordinary business, as in the case of merchandise bought and sold in the market, other evidence is resorted to," notably such reasonable and soundly conceived estimates of replacement cost and present condition as reliably reflect "construction costs, conditions, wages, and prices affecting value" at the time of the inquiry.

In giving dominant weight (in the absence of special conditions demanding otherwise) to the present cost to replace property which has no comparable market value, the courts and commissions have only carried over into this field concepts which are fundamental in the law. For example, in various states of fact arising under the Uniform Sales Act, the ordinary remedy of the party aggrieved is the difference between the contract price and the value of the goods as evidenced by their market price. If, however, the goods have no market value under circumstances which enable its use as a standard, then the rights of the parties are adjudicated according to the difference between the contract price of the goods and the cost

[10] *Wakeman* v. *Wheeler & Wilson Co.*, 110 N. Y. 205.

to manufacture like goods, at the time the right of action arose.[11]

The Opposing Concepts Which Underlie the "Rate Base" for Public Utilities

We often hear open-minded questioning to the following effect:

> Of course, if the valuation concept is to be adopted in determining the "rate base" on which the rates of public utilities should yield a return, it is easy to see that original construction cost or most recent purchase price do not constitute present value. But would it not have been better, for both public utility investors and patrons, if the notion of present value had been kept out of this field and a return upon investment adhered to, along the lines of Mr. Justice Brandeis' classic argument in the Southwestern Bell Telephone Company case?[12]

That is a fair question, on which the last word may not yet have been said by the highest court of this country. Nothing can be deemed more unmistakably settled, however, in the present state of the law, than the constitutional right of the private owners of utility property to receive a fair return upon its *present value*. Perhaps even more decisive, in that connection, is the fact that underlying all this joinder of issue as to the "rate base," there seem to be two opposing and opposite concepts of the status of public utility property, privately owned and managed, under public regulation. Unless and until the prevailing concept is radically changed, the allowance of a return upon a "rate base" which fully reflects "construction costs, conditions, wages, and prices" as of the time of any inquiry, seems to me logical and inescapable. I am not here arguing as to which concept of the status and rights of public utility owners should have been adopted; I am pointing out what seems to me the inevitable implications of the concept which has been adopted.

Under one concept, private property engaged in an enterprise affected with a public interest is a thing apart from all other property. It is the ward of the state, stripped of many of the rights and prerogatives of ownership, yet surrounded by some substitute safeguards as a matter of favor. The money or property of a private owner is, with perhaps unconscious irony, deemed *"taken"* when he first devotes it to such an enterprise; value as of the time of the "taking" is thus value as of the time of the original investment. Thereafter the process of public regulation and responsibility is deemed continuous. The private owner may earn a fair return upon his original investment, but no more. The state may dictate the policies of the management as much as it pleases; the right of the titular owner is only to continue to receive annually the same number of dollars, a fair return upon his original outlay, but no more. The state may initiate and change the rates, compel extensions of the property and service, revise at will the policies of management, so long as the investor receives the same number of dollars annually. If the enterprise fails to earn and pay this return, in any year, subsequent rates shall make good this loss, irrespective of whose fault it was. In other words, under this concept, a public utility owner has none of the opportunities, hazards, incentives, rights, liabilities, of other investors in other productive enterprises; he is largely an owner in name only; and the ownership, operation, and management of public utilities is deemed pretty much removed

[11]See, for example, New York Personal Property Law, Secs. 145, 148; *Todd* v. *Gamble,* 148 N. Y. 382, and innumerable decisions in various states.

[12]262 U. S. 276.

from the free play of the accustomed factors which shape the course of American enterprise.

For better or for worse, the pendulum has swung far away from this concept. The owners of a public utility are fortified in the right to establish its rates, and to manage and shape its policies. Public regulation has power to interfere and revise only if and when it has first been *judicially* determined that *existing* rates and/or practices are unreasonable or oppressive. The functions of regulation are sharply separated from those of management. As far as practicable, unless and until the public interest intervenes for legal cause, the rights, hazards, and incentives of the owners and managers of public utility enterprises are made comparable with those of other productive industries. To be engaged in a public service industry is not deemed ground for discrimination, but for encouragement.

If the essential public services are to continue as projects in which private property is engaged, under private management and public regulation, then it would seem that at least the following ends must be fairly secured, unless serious disabilities and discouragements are to be inflicted upon the investors and managers of such enterprises:

1. Each such enterprise must be allowed to earn a like return for like service, without discrimination because of any accident or incident as to the date when its property was first constructed and/or installed; and
2. Those whose money is already devoted to carrying on a public utility in a given community should not be disadvantaged by that fact, as would be the case if they were denied a right to earn a return upon as large a sum as would be the right of *new* investors who came into the same community and built another plant just like the one in service; and
3. Each such enterprise must be allowed to collect and receive a return made up of dollars which *vary in number* with the changes in their purchasing power, as do the number of dollars received by other private industries, in a period of changing price levels.

All of these attributes of ordinary private enterprise must remain the right and the liability of public service companies, unless they are to be placed at a peculiar disadvantage, as compared with other industries—a disadvantage which does not stimulate good service, needful growth, or progressive improvements in the art.

Let us assume that in a given community, the X Company built a large manufacturing plant and that by arrangement the Y Company builds an electric light and power plant, of which the X Company is to be the sole customer.

What would be the compensation paid to the Y Company by the X Company? The basis would necessarily be such as to reimburse for operating expenses and pay a fair return on the present cost to build the electric plant.

In the same community, however, is another electric plant, belonging to the Z Company, built years ago, which has like efficiency and like capacity available. The cost to build the plant of the Z Company, per kilowatt-hour of capacity, was only half of the present cost to build the plant of the Y Company.

May the patrons of the Z Company compel that company to serve them at rates which yield only half the return, over and above operating expenses, which is received by the Y Company? May the X Company compel the Z Company to serve it at rates which yield a return on no more than the original cost of its plant? May the accident of the time of the original purchase and installation of the property compel such

marked difference in the net revenues of like plants rendering like service at like operating costs?

The Argument That the Investment Theory Is Preferable

The assertion has often been heard during the past few years that the executives and counsel of the utilities would have served their investors better if they had paid no heed to the rising costs of labor and materials and had not put forward "present value" as the economic foundation for the "rate base." Without in any way suggesting that the public service companies should have pursued any other course, had they been free to choose, the fact remains that they had no fair alternative, in justice to their investors.

The contention that the "rate base" should be the "present as compared with the original cost of construction" was insistently urged before the United States Supreme Court by the legal representatives of the states and public bodies, and was decisively upheld by the court on March 7, 1898, in *Smyth* v. *Ames*.[13] The champions of this view, led by the late William J. Bryan, succeeded in establishing the principle that private property devoted to the public service was entitled to earn a return upon its *present value* and not upon its original cost, and that present value was measured by present reproduction cost (with nothing said about any deduction for any kind of depreciation). Reference to the valuation litigation of that period, including cases prior and subsequent to *Smyth* v. *Ames,* will confirm that present value, measured by present cost to construct or replace, was insistently and successfully urged and used by the public representatives, to prevent a return upon the actual cost of construction.[14]

In the Stanislaus case, the Supreme Court upheld a local board in fixing a present value of $377,000, although the actual investment exceeded $991,000. This devastating present value was ascertained from replacement cost, without any suggestion that any manner of depreciation should be deducted. In countless instances, proof of replacement cost, as of a given date, has been proved by and before the commissions, to help deny a public utility a return upon actual investment.

I have been engaged in rate litigation of practically all kinds for many years, and I have yet to be in a case in which, in a time of low prices or a time of high prices, public representatives have joined in urging or admitting that the company was entitled to earn a return upon a sum as great as the amount of its actual investment in the used and useful properties. When replacement cost rose far above original cost, all sorts of weighted averages, "historical costs," estimated and arbitrary deductions, and the like, were still resorted to, in order to enable a contention that the proper "rate base" is less than the investment. So far as my experience goes, that condition continues to this day.

Inasmuch as the legal representatives of the supposed public interest established the "present value" concept and won the ruling that present replacement cost must be taken as the "rate base," in cases where it is lower than actual investment, those representatives or

[13] 169 U. S. 466.

[14] *Covington & Lexington Turnpike Co.* v. *Sandford,* 164 U. S. 597; *Reagan* v. *Farmers' Loan & Trust Co.,* 154 U. S. 412; *San Diego Land and Town Co.* v. *National City,* 174 U. S. 757; *Cotting* v. *Goddard,* 183 U. S. 91; *San Diego Land and Town Co.* v. *Jasper,* 189 U. S. 442; *Stanislaus Co.* v. *San Joaquin & Kings' River C. and O. Co.,* 192 U. S. 214; *Minnesota Rate Cases,* 230 U. S. 352.

their successors have had great and inescapable difficulty in maintaining that investment should be taken as the "rate base," if and when it is lower than present construction cost. As the public representatives defeated the early contentions of the companies that a return should in any event be allowed on the actual cost of property but have demonstrated a facility in urging whichever theory will tend to give the lower value at the particular time, the public service enterprises of America have had no conscionable alternative but to obtain for their investors a return of undiminished purchasing power, despite the decreased purchasing power of the dollar. Since they were not able before the World War to obtain a return on investment when replacement cost was lower, and since they had and have no means of assurance that replacement cost will not be urged again to diminish their return, if and when the price level changes, would it not have been unreasonable for the utility executives to have sought a return only on original cost when the present construction cost was much higher?

In all of these regulatory matters, the spirit of fair play and equality of treatment seems to me fundamental. Mr. Justice Hughes, in the Minnesota rate cases,[15] set out in a single paragraph the inescapable consequences of the early "victories" of the public representatives, in their argument that the "rate base" must be "present as compared with the original cost of construction." Mr. Justice Hughes said:

> As the company may not be protected in its actual investment, if the value of its property be plainly less, so the making of a just return for the use of the property involves the recognition of its fair value if it be more than it cost. That property [of a public service corporation] is held in private ownership, and it is that *property, and not the original cost of it,* of which the owner may not be deprived without due process of law.

"Stability of Return" to the Investor

Advocates of "original cost" as the "rate base" lay a great deal of stress upon stability and permanence of the annual return to the investor. They point out the advantages of an assurance to him that, in times of low prices and high prices alike, the company will earn and he will continue to receive a return upon every dollar he put into the property—never less and never more.

As a practical matter, this "stability" of the return has generally been found to relate to the shadow, and not to the substance of things, and so is not genuinely attractive to the investor. In other industries and investments his return varies, *in number of dollars,* with the changes in price levels; it remains more nearly constant *in purchasing power.* The real stability and permanence lies in the stabilization of the amount of other goods and services which the investor's annual dividends will buy; he finds no satisfying equality or stability in receiving the same number of dollars each year, in spite of the fact that they will buy much less of commodities or services.

The actual experience of business men on this point was tersely summed up by my lamented friend, Robert A. Carter, vice-president of the Consolidated Gas Company of New York, in saying:

> A change in the price level affects the value of all property. As the price level goes up, the values go up, and *vice versa.* There is, however, another element in the equation which operates to neutralize the effect upon the value of property of a change in price level, and that is the purchasing power of the dollar. Invariably, a low purchasing power of

[15] 230 U. S. 352.

the dollar is attended by a high price level, and a high purchasing power of the dollar is attended by a low price level. With a fixed rate of return upon the value, in either case, the amount earned when the value is low and rates are adjusted to the low value has a purchasing power as great as the greater amount earned when the value is high and rates are adjusted to the high value.

The Significance of a Return Upon "Present Value"

For example, the purchasing power of the dollar has recently been, approximately, 61 cents; therefore, property acquired when the purchasing power of the dollar was 100% and having a normal or original investment value of $100, would have a present value of, say, $163.91. A return of 7% on this amount would equal $11.47. But the purchasing power of $11.47 based upon present purchasing power of the dollar is only $7.

Likewise, if the purchasing power of the dollar was, say, $1.25, property which cost $100 when the dollar was at 100% would have a present value of $80; 7% upon this would be $5.60. But the purchasing power of $5.60 based upon such purchasing power of the dollar would be $7.

If, however, original cost is taken for the purpose of fixing rates, with the purchasing power of the dollar at 61 cents, and a 7% return is allowed, it is obvious that this return actually has a purchasing power of only $4.27.

Present Replacement Cost the Controlling Factor in Present Value

In determining the validity of a rate alleged to be confiscatory, the court must consider the reasonable rate of return on property as well as the value thereof. If justice is to be done, either the rate of return or the value must be considered from the standpoint of purchasing power of the dollar. In view of the confusion arising from an ever-changing rate of return involved in the adoption of the normal or original investment value as the rate base, the United States Supreme Court did wisely in deciding in favor of present reproduction cost as the controlling element in determining the value of utility property.

In a clear-sighted opinion in the United States District Court in 1920,[16] Judge Learned Hand said:

> A profit based upon the enhanced value of the capital adds nothing to the company's wealth. Though its capital be measured in more dollars and so, too, its profit, that profit is still paid in the fallen dollar and has no greater buying power than it had before. The increased valuation of the capital will for the years of the depreciated dollar leave the company exactly as it was; it will merely prevent its being compelled to share its putative fair profit with its customers, which by hypothesis it should not be asked to do. The company gains nothing, the customers lose nothing.

An annual return which is *constant only in number of dollars* may actually vary widely and inflict infinite uncertainty, inequality, and loss. An annual return which continues approximately *constant in purchasing power* has the most alluring stability and protective quality, no matter how much it varies in the number of dollars.

In no mistakable manner, the investors of the country are believed to have shown their preference for the basis of computation which better preserves the economic equality of purchasing power. They have manifested this view, despite the fact that some utility managers are at heart still unconverted to the wisdom of the abandonment of the investment concept, to which William J. Bryan dealt its death-blow in *Smyth* v. *Ames*.

The Investment Theory, New Construction and the Interests of the Consumer

If it could be made effective, the investment theory of the "rate base" would give assurance to utility executives and investors that on whatever sums that are in good faith expended

[16] *Consolidated Gas Co.* v. *Newton*, 267 Fed. 231; affirmed, 258 U. S. 165.

for new construction, a fair return may be earned as long as the property remains usefully in service. On the other hand, the investment theory would forbid them to expect more than a return upon original cost, no matter if the purchasing power of money depreciated like marks or kronen. How do this assurance and this prohibition affect the interests of the patrons of the utility?

Advocates of the investment theory point out that, if the "present value" concept were adhered to, serious shrinkages in annual return may soon menace those who in good faith have made large capital outlays at high prices, whereas excessive profits would be the reward of those who installed their properties only at low price levels.

Let us analyze four instances:

1. In a period of temporarily high prices and high wages, a utility builds a new plant, costing $100,000,000. If the investment theory could really be made effective, this would mean that for countless years to come, all of the patrons of the utility would have to pay a return upon $100,000,000, even though a new plant of like capacity could be built for $50,000,000. When the high prices receded to this level, the utility would still collect and receive twice as many dollars from its patrons as though it had built its plant at another time; and the patrons would be permanently burdened with this charge. This would tend to put a premium on new construction in a time of temporarily high prices; to project an annual levy upon the patrons over an indefinite period. Even when wages and prices receded, and so the capacity of the patrons to pay was cut in half, the investment theory would compel them to go on paying a full annual return on *twice the cost to build a like plant new.*

2. In the midst of a low price level, a utility needs a new plant, which it can build then for $50,000,000. That is the time when it should be encouraged to build, just as public policy requires that new construction be kept down to what is urgently necessary in a time of temporarily and abnormally high prices. Yet the investment theory, if it could be made fully effective, would place every possible discouragement in the way of new construction at low costs, because it would deny the investors any share in the rewards which the investment theory vouchsafes to those who build public service properties at "peak" costs.

3. A gas company has 10 water-gas sets in use, which were purchased long ago, in a low-priced period, and represent an investment of only $50,000 each, although it would cost $85,000 each to build such sets today. Due to progress in the art of gas-making, a new type of set is now available, in which gas can be made in equal capacity but at lower unit cost. At present costs of labor and materials, the new sets would cost $100,000 each. Under the investment theory, the making of this desirable replacement, in the interests of greater economy and efficiency in production, would *exactly double* the sum on which the investors would have to pay a return (10 new sets at $100,000 each), in addition to defraying the cost of writing off the 10 sets now in service. Under the *present value* concept, no such barrier to an economic substitution would be interposed, as the only increase in the "rate base" would be the difference between the value of the new type of set and its predecessor —about $15,000 per set.

4. Take now the opposite situation: The utility has 10 water-gas sets in use which originally cost it $100,000 each. They are still producing as much gas as ever, as efficiently as ever, but prices of labor and materials have fallen and a new type of set has been developed, which makes gas more cheaply and can now be built for $50,000 each. In order to make this change in the interest of greater economy and efficiency, the investment theory would require the utility to give up an annual return on $1,000,000 and accept a return on only $500,000. Under the *present value* concept, the utility would be earning a return on no more than the present replacement cost of the sets now in service, which would be something less than the installation cost of the new sets.

In short, the investment concept, *if it could be made effective,* places undue burdens upon the patrons and interposes serious obstacles to the conduct of the business along the lines which would prove of maximum public benefit. It

interrupts and destroys the free play of economic forces and the initiative of good management, and tends to deprive the utilities of the full benefits of private ownership and operation.

The "Original Cost" Doctrine Gives No Adequate Assurance to the Investor

Undoubtedly a great many far-seeing executives in the public service industries would have felt a greater sense of security if the "present value" concept had never been applied to their industries, *provided* some method could have been devised whereby the utility could be constitutionally assured the continuous collection of a return upon the full cost of its property, installed during a period of high prices. The chief advantage of the investment theory to the investor, if it could be made effective, would be the assurance of a return upon original cost, even when the costs of labor and materials fell and a new price level was ushered in.

The trouble is, however, that, as a practical matter, adherence to the investment theory would prevent the utility from earning a return calculated upon anything more than original cost, no matter how great the shrinkage in the purchasing power of the number of dollars constituting such a return, but could give the utility no official guaranty or economic assurance that any countervailing protection would be afforded, if and when costs declined and replacement fell below investment.

Commissions and municipalities could and would give no such guaranties. Public officers were the first to seize upon replacement cost as the means of denying return upon actual cost. But official assurances, even if given, would tend to become economically ineffective. As soon as a situation developed where the existing utility had to collect, as a part of its rates, substantially more than a return upon the present cost to build a plant of like capacity and efficiency, the pressure for competition, through a new private or municipal plant, would tend to become irresistible, unless the utility forestalled such competition by reducing its rates so as to yield a return upon no more than the replacement cost of its property.

I venture the assertion that during the 15 to 20 years which mark the span of public utility regulation in America, the instances have been few and inconsequential where a public utility has been permitted to earn an adequate rate of return upon a plant investment in excess of replacement cost.

In other words, the abandonment of "present value" and the adoption of "original cost" would forestall the investor from ever earning a return which, in *number* of dollars, would increase as their purchasing power went down, in a period of marked advance in construction costs, but could not protect him against being forced to accept a fewer number of dollars, if and when present construction costs fall below original cost.[17]

The Difficulties and Expense of Frequent Reappraisals

The most serious practical objection to the use of present value as the "rate base" is, of course, the difficulty and expense of proving it, through inventories and estimates of replacement cost, and the supposed necessity of frequent reappraisal as a basis for each revision in rates. I do not think it is too much to say that the greater part of the uncertainty, difficulty, and expense, which attends present ascertain-

[17] *Smyth* v. *Ames, supra.*

ments of the value of utility properties in rate proceedings, has had its origin in the efforts of those who have sought insistently the lowest valuations obtainable by any device, so as to sustain rate reductions which otherwise could not be directed.

The distinction between the regulatory fixation of *reasonable* rates and the judicial prevention of the enforcement of *confiscatory* rates needs to be kept in mind in this connection. Unless there have been substantial changes in price levels, or unless there is an effort to force the utmost possible limit of reductions, the processes of reasonable rate regulation do not compel reappraisals; and, if rates are kept within the limits of reasonableness and there is no effort to enforce confiscation, no occasion arises for resort to the courts to prevent it and so no occasion for reinventory and revaluation to demonstrate confiscation beyond peradventure.

Where the charge of confiscation is made, the question to be determined becomes no different in principle from that presented where private property is physically appropriated for public uses. The owner must be allowed to earn on the present value of his property; his loss by the acts of government cannot be made whole by paying him on the basis of his original outlay. Rate-making is kept within the constitutional guaranty when the rate fixed does not confiscate by denying a return on the present worth of the property. A return upon less than the present value represents the bottom level. The other boundaries of rate-making are, of course, matters of justice, policy, reason, fair play, and regulatory adjustment.

Those who object to present value as the criterion because it may be fluctuating and may, at times, necessitate revaluations and revisions of rate with each substantial fluctuation, fail to take into account the fact that the right to a return upon present value is a constitutional right, and that, if the constitutional guaranties were observed, there would be little need for frequent rate adjustment beyond those occasioned by changes in operating costs, and such adjustments could be made almost automatically. After all, where a valuation fairly reflects current prices of an established price level, a rate fixed upon that basis could continue without change for a period of years—a decade or more—except for changes in *operating costs*, such as occur, for example, in the case of a gas company by the rise and fall of oil and coal prices. The difficulty with the rate-making machinery is that the rate-makers have hewed too closely to, and even much under, the limiting line fixed by the Constitution. In more than nine instances out of ten, the difficulties and expense attributed to the present value concept have, in fact, been due only to rate statutes or commission orders which have inflicted gross confiscation, or to official complaints seeking rate reductions to a point far below the limits of confiscation.

Instead of abandoning basic concepts of American industry and of the traditional relationship of government to private property, may not an adequate remedy be found in the judicial fixation of values which reflect not only the reproduction cost as of a given date but also the current price level, by prescribing rates which will afford a return upon such a base, and by using that base during the continuance of that price level and adjusting the rates if and as there transpire material changes in operating costs? By such a course, the constitutional guaranty would be continuously observed, and the task of rate-making would be made far less dif-

ficult, less expensive, and less subject to the hazards of political pressures.

The Supreme Court and Present Value

Complaint is sometimes heard, from economists and some public officers, that the Supreme Court has refrained from prescribing an arithmetical or definitive formula for determining the metes and bounds of valuation. I venture to try to state what seems to me the basic fault and fallacy of these criticisms.

They proceed, it seems to me, upon a failure to realize that the nation's great Court is engaged in the determination whether the guaranties of due process and just compensation have been violated by acts of state regulatory authorities, and that the Court is not trying to establish a code of valuation or an empirical system of economic theory. The Court decides such controversies as come before it, and does so in the light of the Federal Constitution.

The Supreme Court, therefore, examines the transcript of record, to see whether or not the state power was exercised fairly, justly, and in an orderly and reasoned manner, and whether fair standards of judicial ascertainment of facts were followed. If substantial justice has been done, if present value has really been sought and found, in a reasoned and reasonable way, there is no ground for federal interference. Confiscatory consequences of rates may be shown by proofs and findings which set out only *minimum* values. The arbitrary exercise of regulatory power is often so clear that *full* values need not be proved, when there is need for relief from the confiscatory limitation.

The Supreme Court does not fix rates and rarely is obliged to ascertain full present value. It interferes only if and when it finds that injustice has been done and that present value has been fixed arbitrarily, capriciously, and unreasonably. As to a reasoned judgment, based on a consideration of pertinent facts and leading to a just result, it has always seemed to me that the Supreme Court has kept itself free to declare the absence of grounds for complaint under the Federal Constitution, even though an analysis of the valuation might disclose that it varied greatly from that involved in other decisions, assuming that the same mathematical or economic yardstick were applied to each case.

A valuation based only on original cost is disapproved because it is plainly arbitrary and unsound. A valuation which includes a large deduction for straight-line depreciation falls by the same token. A failure to give adequate weight to changes in the cost of labor and materials, in ascertaining present value, is condemned if it appears unsupported by any sound economic reason but due to adherence to the investment theory of valuation. A failure to follow the uncontradicted evidence as to present value, where that evidence consisted solely of reproduction cost, is condemned as violative of due process of law. Because of the concept that present value is not necessarily a matter of rule or formula, a refusal to adopt full present replacement cost as the exact measure of present value may be and has been upheld, upon the particular state of facts disclosed as to the bases of the action of the state tribunal.

Within limits such as these the Supreme Court has seemed long to leave the way wide open for just, reasonable determination, in each case, from all the facts pertinent thereto, and for preventing the processes of regulation from being used arbitrarily and oppressively to inflict discrimination and loss upon the owners of utility properties.

THE PLANNING AND CONTROL OF OUTLYING SHOPPING CENTERS

By J. C. NICHOLS

URBAN development has undergone many changes during the last generation. The automobile, the steel frame or reenforced skyscraper, the kitchenette, the apartment house, and the outlying motion-picture theater have greatly affected the physical layout of cities. Of all these factors perhaps no one is more influential today than the rapidly increasing number of automobiles congesting down-town business streets that were designed for a mere fractional part of the demands now made upon them.

Regardless of the widening of these streets and the opening of new arteries, provision of large garage parking buildings, the use of building roofs for parks, and other efforts, there is no question that a certain decentralization of down-town business centers is now taking place. This does not mean that every city, large and small, will not continue to have its main down-town business section, so vitally important to every city; in fact, every effort should be made to conserve the values of down-town business property, stabilize its location, and increase its efficiency and service to the community in every possible way.

Automobile congestion in these streets, however, the piling up of population into the air in outlying large apartment house centers, and the creating of night life in the outlying suburban centers through motion-picture theaters and other amusement places, are bringing about a large amount of suburban shopping-center development. The control of these suburban shopping centers to meet the new needs of today and to make them best serve the interests of the city is a large task. In planning these suburban business centers we must not fail to recognize present-day needs and endeavor to forecast, so far as possible, future changes.

Evils of Unplanned Shopping Centers

In American cities of any considerable size, our new outlying business centers frequently are becoming the ugliest, most unsightly and disorderly spots of the entire city. New traffic throats of congestion are being created that will sooner or later call for the expenditure of gigantic sums of public funds to relieve. Buildings of every color, size, shape, and design are being huddled and mixed together in a most unpresentable manner. A mixture of glaring billboards, unsightly rubbish dumps, hideous rears, unkempt alleys, dirty loading docks, unrelated, uncongenial mixtures of shops of every type and use, with no relation to one another; shacks and shanties mixed up with good buildings; perfectly square, unadorned buildings of poor design, giving great masses of unpainted common brick walls reared along the sides of a little shop building of good design, are bringing about disorder, unsightliness, and unattractiveness that threaten to mar the beauty and good appearance of the residential regions of American cities. In nearly every city an occasional developer, with broader vision and a greater

regard for his city's future, is endeavoring to meet and solve these problems. Every municipal authority, every property owner, merchant, professional man, and, in fact, the whole body of citizens, should realize the importance of these problems to the city's future growth.

The percentage of the population that is crowding into the cities is increasing at an alarming rate. The percentage of the country's wealth represented in urban real estate is gigantic. Millions of dollars are lost in American cities from the unnecessary shifting of property uses. The abandonment of formerly beautiful residential areas, neglected and blighted former business sections, should arouse every one in a determination to protect the appearance of his city as well as the property values themselves. Unnecessary encroachment of injurious property uses should be prohibited in otherwise beautiful sections of a city. The very home-life of a city is endangered and should be protected.

Desirable Principles in the Planning of Shopping Centers

The following are suggested as underlying factors in the development of new and outlying business centers throughout the United States:

1. No streets should be laid out less than 100 feet in width, with a paving width of at least 60 feet, and preferably as great as 72 feet in width, in order to give diagonal parking for automobiles, thereby increasing two and one-half times the parking area on the streets. A width of 72 feet really is necessary, in order to give ample room for three lines of traffic between the lines of cars parked diagonally on either side of the street, and also to give a certain freedom in moving cars in and out of their diagonal parking positions.

2. The provision of loading and unloading courts in the interior of business center blocks is desirable in order to relieve the front streets of all delivery trucks. Certain types of delivery trucks not only are of immense size and otherwise absorb a large amount of the front street space necessary for the parking of patrons' cars, but they also contribute litter, disorder, and uncleanliness to these streets. Then, too, deliveries on front streets unnecessarily contribute to the misuse of sidewalk streets for the handling of freight, frequently causing danger to pedestrians, crowding sidewalk uses, and presenting a situation unattractive to the clients of the merchants.

3. Where blocks are not of sufficient size to create interior loading courts, alleys should be 24 feet in width, if possible. It is advisable to have room for three lines of truck traffic through alleyways so that cars may be loaded or unloaded at the rear ends of the stores, on both sides of the alleys, and still permit the passing of a third car through the alleyway. It is better to shorten the length of the buildings, in order to give wider alleys or interior loading courts, than to continue to occupy the full depth of the lot with the building, and so force delivery wagons to the front of the stores.

Control of Building Heights

4. Control of building heights is most essential in new outlying business centers before high rent values are established, and before other tall buildings have established a higher building line. It is possible, and worth while in the long run, to establish low building heights, preferably holding suburban business centers to one-story heights,

and in no instance more than two stories. In the first place, it is difficult to make outlying stores pay a rental above the second story. Every additional story in a shopping center increases in direct proportion the amount of traffic in front of the building. If six-, eight-, ten-, or more, story buildings are permitted in outlying business centers, regardless of wide streets, regardless of interior loading courts, and regardless of increased number of streets, the constantly increasing number of automobiles will in a few years give as great traffic congestion in outlying business centers as most cities are suffering today in down-town shopping centers.

These new shopping centers should be built horizontally and not vertically. In the long run, overcongestion of the streets by automobiles will drive away trade. Furthermore, the outlying business center that limits all buildings to a maximum of two stories in height will be more stable, produce more uniform values, spread over a larger area, and better serve the community. The limitation to a two-story height and the provision of wide streets, wide alleys, or interior loading courts afford ample opportunity for light, air, and sunshine, for the health and convenience both of the patrons and of the employees of the shops themselves.

Control by the zoning board of the city to guard against providing too great an amount of business property in the outlying sections of the city is also vital to the permanence and stability of such values. There is a tendency today greatly to overbuild outlying shops, and thus cheapen the character of the buildings, destroy the possibility of a reasonable profit to the merchant, and also contribute an unnecessary injury to otherwise beautiful and attractive residential areas of a city. In many of our larger cities there are many times more outlying shops and business properties being developed than are justified by present or future needs. Sooner or later the owners of the land and the tenants of the buildings will find a great shrinkage in value and a great dearth of trade. Real estate, the real foundation of all wealth, becomes unstable with a lack of general control.

Zoning is the greatest boon known to a city today and, in fact, the greatest protection to city life. It affects equally the protection of the rights of air, light, and sunshine, and decent surroundings for the small cottage of the laboring man as well as the large residential estates of a community. It is just as vital to the protection of the investor in a small outlying business lot as it is to the owner of a great office building in the down-town business district. It sets aside and reserves, for industrial, railway, and manufacturing uses, land for the city's normal development, just as much as it serves the areas properly belonging to future residential development. It puts order instead of chaos into American city building.

No greater opportunity is offered for better civic development than in such careful zoning and regulation as is possible today in the establishment and control of the outlying shopping centers springing up overnight in cities throughout our land.

5. Other desirable policies are the provision of smaller blocks and the dedication of a larger percentage of the land area to streets; perhaps even as much as 50% of the land should be given to streets. In this manner the percentage of land occupied by buildings is reduced and to that extent a contribution is made to the solution of the traffic problem. Then, too, groups of shops in a small block contribute trade-

pulling power to one another, more than do shops in a large block, where the distance from the merchant on one side of the block around to the merchant on the other side is far greater; to that extent, they are less influential in helping one another.

6. By-passing of through lines of traffic around outlying shopping centers, instead of endeavoring to throw all general traffic through a shopping center, will, in the long run, help solve the traffic problems in outlying centers, and to that extent stabilize the new business area. Most realtors today are constantly doing everything in their power to lead trafficways and boulevards through their business centers, thinking that a great number of cars passing through a shopping center adds to its trade-getting powers. Of course, every such shopping center should be immediately accessible and entirely visible to these main arteries of travel, but wherever it is possible to carry these main flows of traffic around, or along the side of, the shopping center instead of through the shopping center, it is wise to do so.

The Location of Shops

7. Massing of the shops into contiguous blocks, radiating, if possible, from one center, contributes greatly to the solution of the traffic problem and creates many conveniences in contrast to the string-street development where continuous shops are built on each side of a street one or two miles in length. The string business street soon becomes a main artery of travel, and causes such a great flow of traffic over it that little space is left for parking along its sides and in front of its shops. This makes it difficult to shop from one side of the street to the other; and also the pulling power of one shop for another is far less in such a type of development than where shops are massed in several radiating or contiguous streets. The more compact development brings shopkeepers closer to one another and enables patrons to park their cars and easily walk from shop to shop. Then, too, a string of stores extending a mile or more on each side of the street carries business houses into large residential areas, frequently doing great injury to abutting homes in the rear of, or among, these stores. It is the very opposite of wise zoning and districting of a city. It destroys values instead of creating values.

8. The grouping of related shops should be given much more study than has been customary. The economic hazard to a fine jewelry store or a fine restaurant caused by an adjoining shop of unpleasant character is a large factor. A hardware store, a garage, a fire or police station does not particularly help a ladies' wearing apparel shop. A plumber or a tinshop is not a good neighbor for a shop catering to the needs of the baby. Wherever possible, women's and children's shops should be grouped together; building materials and supplies should be put together; shops handling heavier merchandise should be grouped; and service shops, such as barber-shops, massage parlors, and shoe-shining shops, should be located near each other. Produce, meat markets, groceries, and all such shops are much more help to one another if grouped closely; and yet they generally produce an odor and a disorderly appearance not helpful to shops of a more refined character. The odors of a restaurant are much more objectionable to certain types of shops than others. There has already been a certain natural classification of automobile display rooms and automobile repair shops in most cities, which is of convenience to

patrons and of value to similar types of shops. This natural grouping needs to be extended to other types of enterprises by careful planning, for it is a phase of city development generally outside the scope of zoning laws.

9. America has an opportunity in this new era of building outlying shopping centers. It is possible to make these shopping centers distinctive and appealing in appearance, individualistic and attractive in design and layout, affording character and color to the general appearance of the city. Cleanliness and good order, a reasonable uniformity and harmony of design, height and elevation, will go far to make our American cities more attractive, more appealing, and of unquestioned value to the people who live in these cities. Out of this order and cleanliness will come a practical beauty of great intangible value to the spirit, patriotism, and well-being of any community.

Esthetic Considerations

10. In the building of these new shopping centers, there is need for reasonable regulations as to the placing of billboards, of dangerous and unsightly overhanging signs, and the elimination of unnecessary screaming advertising placards. Hideous combinations of color, great scrawling, flaming advertising lettering across an otherwise pleasing store front or plate-glass window, ought to be prohibited. Their direct value to a merchant is highly questionable; their injury to a neighboring shop is frequently great. In the long run, the general good of any new shopping center controlling such unsightly, ugly appearances will give far greater value to each unit in the center than any sacrifice suffered by a merchant in foregoing such practices. Buildings and store fronts must be distinctive; window displays must attract the attention of the casual passer-by without, however, being the sort of displays which displease and frequently drive trade away from such overambitious merchants.

11. Streets and sidewalk spaces in new shopping centers should be kept free of unnecessary obstructions. Popcorn stands, signboards, newsstands, and other encroachments on city streets and sidewalks should not be permitted. This not only assists in handling traffic, but gives a more orderly appearance and is more appealing to the patrons.

12. Too great a uniformity in store fronts perhaps may bring dull monotony. Sufficient variety can well be applied to give interest to a street scene and to building fronts.

It is well, wherever possible, to follow a general type of architecture in each group, one group having harmonizing Colonial types, another Spanish, another English, another French, and other good, general architectural designs. In this way, a good appearance is given to a city's picture as a whole. Careful restrictions should be made as to changing of color schemes or building designs of these buildings. Control of the design of buildings erected on a vacant lot in a shopping center should be as carefully safeguarded as it is in the case of restrictions on residences in high-class subdivisions today.

13. Street lighting and store-front lighting should be studied in advance and given much more attention than has been the custom heretofore.

14. It is desirable also to provide groups of shops for immediate local and daily needs, in contrast to larger shopping centers comprising stores for general needs to serve a larger territory. The centers providing a few neighbor-

hood units, such as retail grocery, meat market, bakery, drug-store, and beauty shop, can well be placed approximately half a mile apart. Certainly there is no necessity of closer grouping. From one to two miles apart, larger general groups should be provided, giving desirable locations for stores that can only prosper by serving a larger territory.

15. The provision of certain open squares, plazas, little parks or spaces for fountains or a little piece of statuary will add attractiveness and appeal to a shopping center as well as civic beauty and adornment to the city as a whole. Grass, trees, flowers, shrubbery and garden ornaments, or park development can be made an integral part of new business centers, as is so well exemplified in many European cities.

16. Reasonable regard should always be had for the appearance of the sides of shop buildings on side streets, or even the rear of buildings where viewed from the store fronts or second-story windows of adjoining buildings.

The writer suggests the above principles to focus attention upon a much neglected phase of land planning. Some of these considerations are within the scope of zoning and city-planning authorities; others may be the self-imposed standards of real estate dealers who are the builders or guides of the additions to city areas. The underlying objectives are two: civic beauty and economic land planning. In the long run, however, good planning is good business. The economic utilization of street, park, and building areas in outlying shopping centers will be decidedly helpful in ameliorating the vexatious problems of traffic congestion and uncomfortable and unsightly living surroundings.

THE WHEAT FARMER OF SOUTHEASTERN WASHINGTON

By WILLIAM E. LEONARD

THE visitor from the middle states into eastern Washington, after days of travel through a semi-desert sagebrush country, at last finds himself on the western slope of the Blue Mountains. Here the face of nature changes, becoming more kindly and fruitful. Should it be late in the month of July he sees, slowly creeping over the foothill wheat farms, the mammoth combined harvesters and threshers, leaving behind them thickly scattered sacks of wheat ready for the market. He also sees on the adjoining lands moving dust clouds, evidence of harrows and "slickers" at work preparing the fallow lands for the autumn planting of wheat.

I. The Hill Farms of Eastern Washington

This is the wheat country of the Northwest—a region of fruitful acres and relatively big farms. It is an irregular country, stretching from Umatilla County,[1] in northern Oregon, northward through the Walla Walla County, through Columbia, Asotin, and Garfield counties to Whitman County, the last-named being most generally known as the Palouse country, which has about one-half of the farms found in this region (Chart I). The distance through the five counties is 150 miles.

This is a rolling country of wind-blown hills, so rough, indeed, that it must be cultivated with specially constructed machinery, capable of somewhat dangerous hill work. Roads follow the valleys and here also are located the farmsteads. The rainfall is as low as a few inches up to 30 or 40 inches, increasing rapidly with the altitude. The summers are long and dry and hot. The late fall and early spring bring the major portion of the annual rainfall. The soil is a light, rich volcanic ash. Erosion, due to the character of the rainfall, is very small, so that the hill tops are rich and fertile. Neither the cyclone nor the savage thunderstorm visit this country; and the only storm, dreaded but not feared, is the occasional dust storm of summer.

The summer fallow system of cultivation is found everywhere in this region except here and there in the valleys where irrigation becomes possible. The Walla Walla Valley is such a region, and this is intensively cultivated in fruits and vegetables. Summer fallow requires that one-half of the land of each farm lie idle every year. Although it is not in crop, it is steadily cultivated to conserve the moisture and to keep the land free from weeds. The other half of the farm is in wheat. This type of farming explains in part the prevalence of large farms. Outside the valley regions it is strictly a one-crop country.

In the production of its one crop, few countries can surpass it. Within these counties is found about one-third the normal wheat acreage of the state, yet it produces from 45% to 60% of the

[1] In Umatilla County, Oregon, and Latah County, Idaho, the conditions are essentially the same as in eastern Washington, and a fuller study of this problem should include these counties as well.

ordinary annual product. These counties had, in 1920, an average of 24.5 bushels to the acre, while all the other counties of the state gave 12.7 bushels, the latter being about the average yield for the whole nation. The discovery that the hill land of this region could produce wheat seems to have been made when, in 1863, a farmer, as an experiment, planted 50 acres of hill land to wheat and harvested the next year 1,650 bushels—a 33 bushel to the acre crop—and the historian remarks that "No more important discovery has been made in any country." True it is that the better lands, rough lands far up the mountain slope, when not too rough, give not only the largest yields, but also are the surest from year to year. Stories are told of wheat going 40 or more bushels to the acre without a crop failure in 25 years. This is from foothill land.

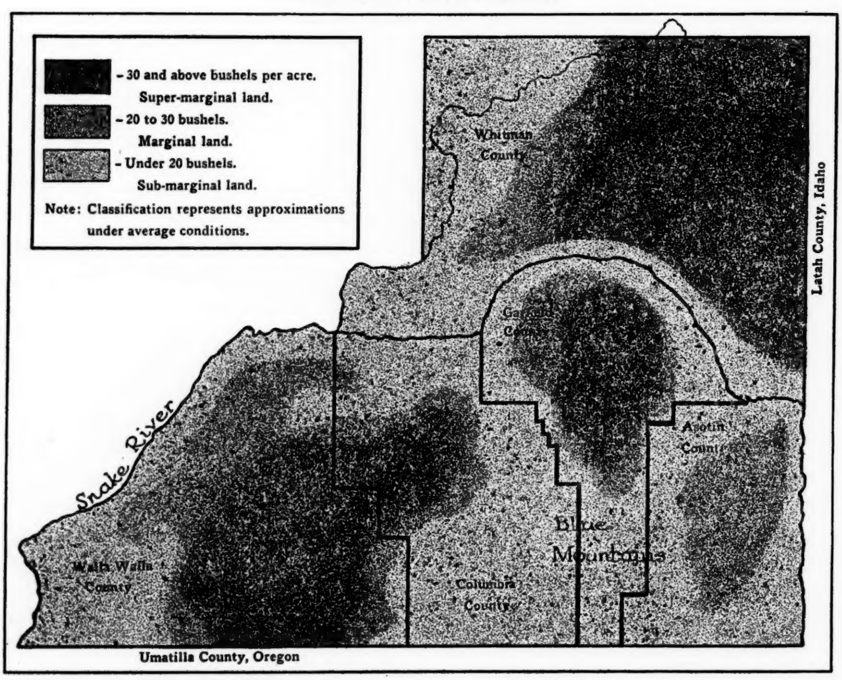
Risks of Wheat Farming

And yet the wheat farmers here labor under singularly high risks, and any clear understanding of the present situation requires that these should be known. The land everywhere is exceptional in its fertility. However, the deficiency in rainfall, together with its irregularity, is a most important limiting factor. On or near the crest of the Blue Mountains, the rainfall may range from 30 to 50 inches with both regularity and certainty. Moving westward

Chart I

COUNTIES OF SOUTHEASTERN WASHINGTON

According to Productive Qualities



down the foothill country the amount rapidly diminishes and its uncertainty and irregularity rapidly increase. Westward 50 to 75 miles from the Blue Mountains, it drops to 5 or 7 inches.

Within this area, 75 by 150 miles, are found really three belts of land. These may be spoken of as super-marginal, marginal, and sub-marginal soils (Chart I). The boundaries between these three classes of land cannot be permanently and exactly drawn since they shift with the rainfall. The super-marginal lands are very limited in amount and are found up on the foothills. These lands rarely, if ever, fail to give good crops. The rainfall is sufficient both in quantity and regularity. Here farmers can make a profit even when prices are very low.

Marginal lands are much more abundant and are those which under ordinary conditions may be expected to give good crops. Occasionally crops fall short because of seasonal variations, and if a low yield and low prices come the same year, farmers lose heavily.

Sub-marginal lands promise nothing in the way of a sufficient rainfall. Yet now and then come favorable seasonal conditions enabling farmers to produce extraordinary crops. These favorable seasons may last for several years, to be followed by many lean years.

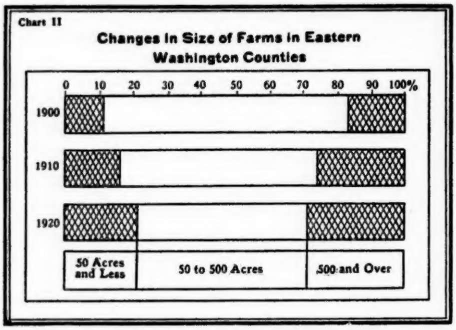
Naturally, the demand for super-marginal lands far exceeds the supply. Their values have long been high and the temptation is always present to run up their sale prices beyond their productive worth. Probably these lands have long been overcapitalized. Failing to get the best lands, farmers go to the land of the greater risk. Here in ordinary years they prosper, sometimes famously, certainly in years when both climatic and price conditions are satisfactory. Here, too, they fall upon hard years and lose heavily from the opposite conditions. In a series of good years the demand for these lands also exceeds the supply and then farmers take a chance on lands of the greatest risk—those spoken of as sub-marginal. On these we find many a record of blasted hopes and lost fortunes. Were it possible to draw definite lines between the best, the good, and the poor lands, one of the large risk elements might be eliminated. This cannot be done since it is not so much a matter of soil differences as of rainfall. Until scientists are able to untangle the mysteries of the weather cycle, the farmer, in this region particularly, always faces the dangerous possibility of being tempted too far out upon sub-marginal lands.

The Washington wheat farmer faces another risk not found to the same extent elsewhere. There is a great variety of local conditions to which he must adjust his operations. These arise out of differences of altitude, the varying character of prevailing winds, differences in the amount of thawing and freezing, differences arising from northern and southern exposures. Two farms in the same community may be so different as to require entirely different methods of treatment. These local differences have, therefore, made necessary much experimentation. Success in farming

TABLE I. YIELD OF WHEAT PER ACRE IN FIVE EASTERN WASHINGTON COUNTIES COMPARED WITH ALL OTHER COUNTIES OF THE STATE*

	EASTERN WASHINGTON COUNTIES			ALL OTHER COUNTIES		
Year	Average Yield per Acre (bushels)	Percentage of Total Acres	Percentage of Total Product	Average Yield per Acre (bushels)	Percentage of Total Acres	Percentage of Total Product
1900	23.0	48%	60%	16.0	52%	40%
1910	28.4	30	45	15.2	70	55
1920	24.5	34	50	12.7	66	50

* Data from *United States Census.*



here often comes as the result of rightly chosen adaptations. As a result, probably in no wheat country are so many varieties of wheat grown. Men have discovered that one kind of wheat has greater drought-resisting powers; that others give rapid growth and early maturity; that some will stand much freezing, while others, little; one grade of wheat may be good for winter planting, but very poor for spring planting. These local differences have some effect also upon the milling qualities of wheat.

Another puzzling matter for the wheat farmers is when to plant. This is a winter wheat country. Few farmers expect to plant any other kind, yet the possibility of having to do so always exists. No one can predict the coming of the fall rains and it is unsafe, often impossible, to plant earlier. They may arrive early, they may be abundant, the planting gets a fine start and an excellent growth is made through the fall months, and this almost certainly means a big harvest. Rains may, however, come late, the planting gets a slender start and the winter freezing is upon it; or the early snow-cover may melt, leaving the plants exposed to much alternate thawing and freezing, and this is an ever-present danger. Replanting to spring wheat is a heavy additional expense. Most of all, spring wheat faces an even greater hazard, that of an insufficient rainfall in the early spring months. Rarely does the spring crop equal the ordinary winter wheat yield.

II. Economic Conditions in Pre-War Days

In the years before 1900 the 160-acre to 320-acre farm was all but universal. Everywhere in those years each homestead supported its family, or aimed to. Even today along the roadsides appear evidences of abandoned farmsteads, and in one journey of a hundred miles in three counties of this region, 30 such abandonments were counted. The farmstead, but not the land, has been abandoned; that has become a part of a larger farm. In the meantime the permanent population has changed. "Forty years ago," a chronicler tells us, "I taught a country school of 60 students. This district is now combined with six others and has an enrolment of 65 students." This does not mean necessarily a decline in the population. The statement applied only to such regions as had been settled. Now population has spread itself out thinly over a much larger area of the country.

Size of Farms

Up to 1920 two clear tendencies showed themselves as to the size of farms in eastern Washington

TABLE II. CHANGES IN THE SIZE OF FARMS IN EASTERN WASHINGTON, 1900-1920*

Year	Number of Small Farms, Up to 50 Acres	Number of Middle-sized Farms, 50 to 500 Acres	Number of Large Farms, 500 Acres Up
1900	604	4,069	898
1910	1,019	3,657	1,565
1920	1,287	3,111	1,674

* Data from *United States Census.*

(Table II). If we can assume a middle-sized farm to be from 50 to 500 acres, and that farms above this amount are large and those below small, it appears that the original middle-sized farm—the old homestead type—is slowly disappearing. On the one hand, the farm, if capable of irrigation, tends towards subdivision into a half-dozen or more farms and these are intensively cultivated. But in the dry-land, wheat-raising sections, farms have been steadily growing larger. This was certainly true up to 1920. Since then competent observers believe that there is a tendency in the opposite direction.

In this period of 20 years, small farms in the counties studied more than doubled in number—604 to 1,287—while the number of middle-sized farms has been reduced by one-fourth—4,069 to 3,111—and the number of large farms has almost doubled—898 to 1,674. This is not entirely the result of new farms being created; for in these years only 200 additional farms have been made. The process is largely one of subdivision and combination. The largest of the large farms run into 25,000 or 30,000 acres.

The more significant fact is of another sort. The small farms, because of their few acres each, make up a very small fraction of the acreage of all farm land in this area (Chart II). The total holdings in small farms would not reach 50,000 acres, or something like 2% or 3% of the 2,000,000 acres of farm land in these counties. At the other extreme, however, a conservative estimate of the acreage in farms above 500 acres in size certainly would not fall short of 75%, or a total of 1,200,000 acres. The medium-sized farms may aggregate an acreage of 800,000, but this, as stated above, is steadily becoming smaller.

Trend of Land Values

Any review of the local wheat farmer's present situation would be incomplete if it did not give attention to the matter of land values (Table III). From 1900, or thereabouts, to 1920, values advanced at a rapid rate. With some local differences this was true for all eastern Washington. Considering the region as a whole, the average farm in 1900 was valued at $7,300, or $12 an acre. In 1920 the same average farm carried a value of $41,000 at $66 an acre. These values were arrived at by considering all farms whatever their character or size. The greater part of this increase, it should be noted, took place before the war. From 1900 to 1910 farm values increased about three-

TABLE III. AVERAGE VALUES OF FARMS IN EASTERN WASHINGTON, 1900, 1910, 1920*

County	1900		1910		1920	
	Average Value of Farm	Value per Acre	Average Value of Farm	Value per Acre	Average Value of Farm	Value per Acre
Asotin	$ 3,408	$ 9.42	$11,539	$25.71	$20,679	$34.53
Columbia	7,293	14.68	21,464	39.24	47,853	77.30
Garfield	5,872	8.05	22,392	28.72	48,364	53.17
Walla Walla	13,586	16.81	28,574	45.36	43,072	76.67
Whitman	6,330	12.67	21,756	46.45	45,913	91.47
All	$ 7,297	$12.30	$21,145	$37.05	$41,180	$66.60

* Data from *United States Census.*

fold; from 1910 to 1920, twofold. Were it possible to segregate wheat farms from others, the average value of the wheat farms alone would run beyond $41,000. As will be shown later, this high value is due, not to enhanced value of improvements, live stock, and machinery, but to land as land.

Years of Prosperity and Expansion

The years immediately preceding the World War brought unexampled prosperity to the wheat growers of Washington. No period before or since can be compared to those years. The average yield of wheat in the whole state for the four years, 1911 to 1914, was 22.5 bushels to the acre, and for eastern Washington it must certainly have been beyond 30 bushels. The average price ranged about 80 cents a bushel, giving an acre of wheat a value of $25. Costs of production ran low. Farm machinery and all supplies were moderately priced, labor had not yet risen to anything like its present high level, and the tax burden was light. Farmers generally lived on and worked their own farms; they yet followed the simple life, for they were not far away from the earlier pioneer days of hardship. Every circumstance seemed to work to the farmer's advantage. He was rapidly growing rich.

For the first time the increasing wealth of farmers opened up for them new possibilities in a way and to an extent quite beyond any earlier expectations. They were getting rich, why not get richer? They began buying more land, scarcely stopping to higgle over its price. They expanded their equipment, adding every type of new machine however expensive it might be and however temporary its usefulness might prove to be. Rich men should live in a manner becoming the rich, and thus they indulged new and expensive habits of life, as, of course, was natural. Often they acquired elaborate and beautiful homes in the city for winter residences; still oftener they got the "high-powered fever" and a hankering for California climate. The standard of life for the farmer class was on a decidedly stiff upgrade.

III. What the Great War Did!

The war created no new tendencies; it did, however, add a new impulse to old ones. Farmers heard and responded to the call, "Raise more wheat and win the war"; the guaranteed price seemed in those early days a most generous one, seemingly large enough to remove one of the big risk elements to the wheat grower. With a new energy and with an intensified motive, they went about the business of getting this essential war product. More new and poor land, submarginal land, went into wheat. More land was purchased, often by tenant farmers, who now saw their way clear to ownership. The farmers had excellent credit at the banks, and, in addition, the Federal Farm Loan System was now at their service. Most farmers went heavily into debt. Farming assumed more and more the nature of a capitalistic business.

TABLE IV. WHEAT PRODUCTION IN THE STATE OF WASHINGTON

Particulars	Before the War 1911-1914	War-Period 1915-1919	After the War 1920-1923
Average acres	1,776,000	2,062,000	2,457,000
Average yield, bushels	40,312,000	37,512,000	47,516,000
Average bushels per acre	22.5	19.0	19.4
Average price per bushel	$0.80	$1.65	$1.02
Average gross income per acre	$18.00	$31.35	$19.78

* Data from *Yearbooks of United States Department of Agricul ure*

And now the picture begins to change. Washington wheat farmers had reached, or were reaching, as it later proved to be, the end of really good years. Many of the favorable conditions existing before 1915 now turned against them. In the first place, a series of relatively dry years came, reducing the average yield of wheat in the state of Washington from 22.5 bushels per acre to 19.0 for the years of the war (Table IV). In the eastern Washington country it must have fallen much below 25 bushels. This was a serious matter in the light of the new costs of production, the importance of which at this time could not be realized. The cost of labor, never before a matter of great concern, now became a major problem and continues to be such. The farmer, in the war years, had to compete with mines, shipyards and forests for labor, and at best could obtain but low-grade, reluctant, and turbulent workers. The prices of farm supplies of every sort rapidly rose to double their pre-war level. The wheat farmer, like any one-crop farmer, is peculiarly dependent upon the retail merchant. In this country on dry lands, there are great difficulties in raising gardens, and even cows and pigs are a nuisance. Thus it is that the wheat farmer, especially if operations are on a large scale, must run heavy store accounts to maintain both his farm and his household. In the war period the farmer had to set an unusually fine table to retain his harvest help.

Then, too, for the first time, the weight of an increasing tax began to be felt. Often, in the earlier days of the war, the farmer voted taxes upon himself for improved highways and the like; more often they were thoughtlessly voted by everybody without any consideration as to when or how they might be paid. In his manner of life, too, as with all the rest of us, wise and frugal spending became a lost art.

The guaranteed price of $2.25 was a basic price, but no one ever realized that price except the man who could haul his wheat to some primary market. Eastern Washington farmers were far distant from any such market. Furthermore, new and rigid grading and inspection laws were put into operation, which, farmers assert, have worked to their disadvantage. When full account is taken of all the additional costs of production of war wheat, the high profits of farmers fade rapidly away.

IV. What the Crisis of 1920 Did!

The autumn of 1920 found the farmer in a situation somewhat as follows: His wheat, and this was for the whole state, ran 17 bushels to the acre, while its price was in the neighborhood of $1.35 a bushel. At this yield and price only the exceptional farmer could strike an even balance sheet. For we must remember that he was heavily in debt; some debts having been unwisely contracted in the purchase of land; some because of high costs of production, including taxes; some the result of speculative ventures outside the field of agriculture. There were some farmers, of course, who were content not to expand. They took advantage of earlier conditions to free themselves of debt and once out, stayed out. As it turned out, however, these were the lucky ones, but they were in the great minority.

From that date of price collapse to this, farmers have had a stiff struggle against overwhelming odds. At this moment the final outcome is not certain. Doubtless the financial situation of present-day farmers is not harder than it was for their fathers in 1893 and the

years following. Now, however, they are suffering more keenly for the very good reason that they have much more to give up than their fathers had. Then farmers were accustomed to the simple life—a life accompanied by privation and hardship. That kind of a life seemed quite the natural order of things. This is not true for the present generation of farmers; they have long had an abundance of all necessaries of life and a fairly good taste of luxuries. To give up some portion of this abundance, to return to a simpler life, as now seems desirable, is a testing of nerve and fiber such as these people have not known. If this alone is the key to the solution of today's wheat-farming problems, we may look forward hopefully, for it is impossible to think that these people have permanently lost anything of their rugged virtues.

In greater detail we shall now look the farmers' immediate question fairly in the face.

Effects of the Trend of Land Values

Take the matter of land values. In 1920, land prices reached their summit, stood at that point for a brief time, then plunged downward; and there prices have remained. For men overstocked with land and at the same time heavily in debt this was a most serious matter, for fully 90% of their wealth was in land and its improvements. There has been no demand for land at any price, and even the sheriff has had difficulty in getting offers large enough to cover the amount of the mortgage resting upon land under foreclosure proceedings. The men in possession of unencumbered land in 1920, who were content with their holdings, and who have since practiced economy and managed carefully, have held their own; a few of them have made money. Other farmers are in three classes: (1) In the first group come those who for many years held heavily mortgaged farms. These debts were not a source of any great concern, because the farmer hoped for some favorable turn of affairs which would wipe the slate clean. Since 1920, these men have had a desperate struggle to save any part of their holdings. (2) More numerous are the men who owned land, were free from debt, but wanted more land, purchased at war prices, plastered the free land with mortgages, and are now threatened with foreclosure proceedings on both the old and new holdings. (3) Finally, there are tenant farmers who, in the prosperous years before 1920, had accumulated $10,000 to $30,000 and bought land on a conditional sale. Only the exceptional man among these has weathered the storm. Most are back again in the tenant class, a most unfortunate and discouraged group of men.

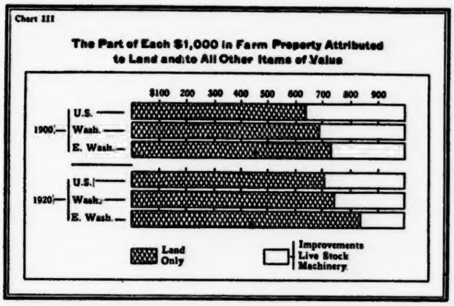
Merely a casual study of farm values in this region brings into view an outstanding fact of great importance. In the purchase of land men have been paying prices much beyond its productive value.[2] As has been mentioned previously, while the average farm was increasing from five- to sixfold in value, the value of wheat raised from an acre of land tells quite a different story.

[2] By real value I have in mind the closest approximation that is possible between the sale price of land and the values that the land on the average will produce on the basis of the average prices for the product from the land. That is to say: An acre of land averaging 10 bushels to the acre above normal costs during the past five years, with an average December price of $1 over the same period, at a current interest rate of 6%, becomes worth $166 per acre. This I am thinking of as its productive value. I am, of course, aware that other factors may contribute to value besides productive capacity.

TABLE V. THE PART OF EACH $1,000 WORTH OF FARM PROPERTY WHICH IS REPRESENTED BY LAND ONLY*

Location	1900	1910	1920
United States......	$639	$695	$704
Washington.......	$690	$810	$750
Whitman County..	$732	$818	$843
Garfield County...	675	800	836
Columbia County..	743	818	847
Walla Walla County	783	848	837
Eastern Washington	$733	$821	$841

* Data from *United States Census.*



From 1911 to 1914, an average acre of wheat in eastern Washington produced a value of $18; from 1915 to 1919, the same acre brought a value of $31; from 1920 to 1923, its value fell to $19. This is to say, an acre of land came in 1920 to bear no correspondence to what it might reasonably be expected to produce.

In this connection another outstanding fact is of even greater importance. In buying an eastern Washington farm, the value attributed to the land only is abnormally large (Table V). Take, for instance, the year 1900: of every $1,000 invested in farm property in eastern Washington, $733 went into land, while the remainder of $267 took the form of improvements, live stock, and machinery. For the state as a whole $690 was in land, $310 in improvements, and so forth. Compare this with 1920: Land now stands at $841 out of each $1,000, and all other values drop to $159. This leads directly to one conclusion — namely, the land factor has been taking the lion's share of the farmer's resources (Chart III). The farmer has been paying so much for his land that he is left without adequate working capital. Confronted with this situation he is forced to do one of two things, either mortgage his land or become dependent upon the bank for working capital. In many cases he is forced to do both.

Mortgage Indebtedness

The farmer's mortgage indebtedness is no longer a millstone, it is a mountain. From 1910 to 1920 mortgage indebtedness for all these counties has doubled (Table VI), and during the past five years it has grown rapidly. The mortgage debt on the average mortgaged farm now is not far from $7,000. It is not known what percentage of all farms

TABLE VI. MORTGAGE INDEBTEDNESS IN FIVE EASTERN WASHINGTON COUNTIES, 1910-1920*

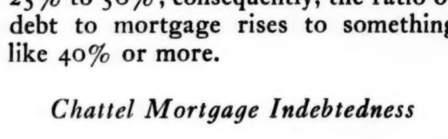
Year	Number of Farms Reporting Mortgage	Percentage of Farms Mortgaged	Number of Farms Reporting Amount of Mortgage	Average Amount Reported	Probable Total Mortgage Debt	Percentage of Increase 1910-1920
1910	1,791	28.7%	1,195	$3,678	$ 6,587,298	
1920	1,843	30.3	1,279	7,098	13,076,614	98.5%

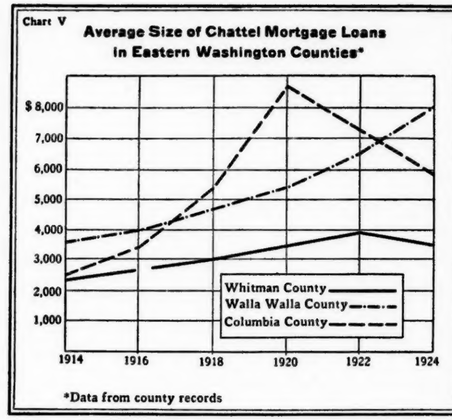
* Data from *United States Census.*

are under mortgage, but on the basis of those which reported, 30% were under mortgage debt. This is, as all observers agree, much below the real facts. A very well informed abstractor in one of the counties containing 50% of all the farms in this region, on the basis of a partial but careful study, gives the total for that county as $21,000,000, in 1924. If this is an approximation to the truth, this means a $7,000 debt on *every* farm in the county and a total for these five counties, applying the same average, of more than $40,000,000. In the period of war inflation, 1920, the farm property for these counties, according to the *United States Census*, was $232,000,000. The above debt of $40,000,000, therefore, constitutes 18% of the total farm value. But it must be borne in mind that since 1920 farm values have dropped from 25% to 50%; consequently, the ratio of debt to mortgage rises to something like 40% or more.

Chattel Mortgage Indebtedness

Moreover, the above analysis takes no account of the chattel mortgage. The story of this form of indebtedness during the past 10 years is an interesting one and in part graphically told in the

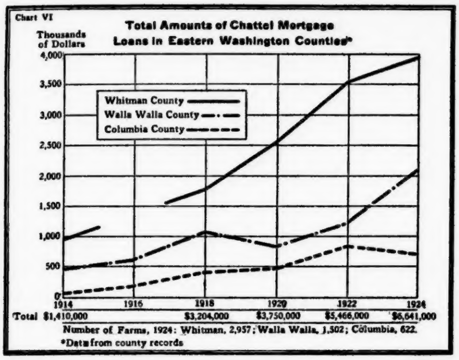




accompanying charts. In number chattel mortgages have increased almost threefold (Chart IV); they have rapidly increased in size (Chart V); and more important yet, in total amounts they have grown enormously—from a million and a half in 1914 to more than six and one-half in 1924 (Charts VI and VII).

The chattel mortgage may be thought of as a somewhat accurate barometer of agricultural conditions. When considered in this light, it may be well to call attention to several facts:

1. The amounts of these loans do not necessarily measure the total volume of outstanding chattel mortgage debts for any year. They are short-time loans, some of them on the basis of demand, some of them for a period of three years, or possibly more. Probably during any one year, many short-time loans are canceled out; probably also many represent a series of renewals and cumulations, as in the case of Mr. X, who in January borrows a sum of money for six months and at the end of the period, being unable to pay either principal or interest, makes a renewal covering both for another period, and so on for several years before he is able to square himself. In such cases, and there are



many of them, the weight of interest accumulations becomes heavy indeed.

2. The chattel mortgage is in the nature of a last extremity loan. Sometimes the borrower gives his machinery as security, sometimes his live stock, very frequently the next year's crop, and in the typical case all three. This is a dangerous kind of loan, for it may involve the farmer's working capital and his future labor.

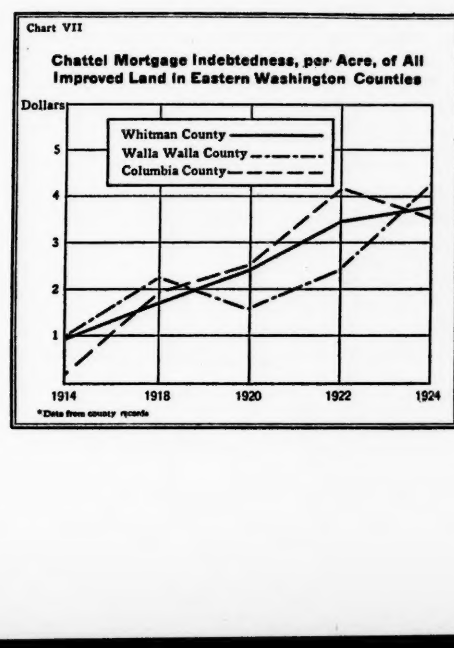
3. The chattel mortgage is the tenant's only method of getting loans. At the present time the banks are painfully exacting as to the security which they will accept. In the case of a landowner, the chattel mortgage usually means that his land has already been mortgaged, possibly to the limit, and that he is now driven to the extremity of pledging his working capital and his future labor.

4. Normally the chattel mortgage is given to the local bank and at a current rate of interest quite too high for farmers to meet successfully.

5. It is interesting to note that 60% of chattel mortgage loans are made in the last four months of the year, October being apparently the month of greatest need (Chart VIII). In November and December the demand for such loans drops off rapidly. Presumably the major portion of these late autumn loans are for short-time purposes—for some immediate need in getting the year's crops on the market, and these will be paid when the crop is sold. Such loans may not indicate anything more than a temporary shortage of working capital. It is true also that there is an important unknown fraction of these autumn loans, together with the loans running through the other months of the year, that are made after the year's crop has gone to the market. This, of course, means that some future crop is pledged for the payment of loans. In general, the chattel mortgage as we find it at the present time seems to indicate a critical condition among farmers.

The Effect of Taxes

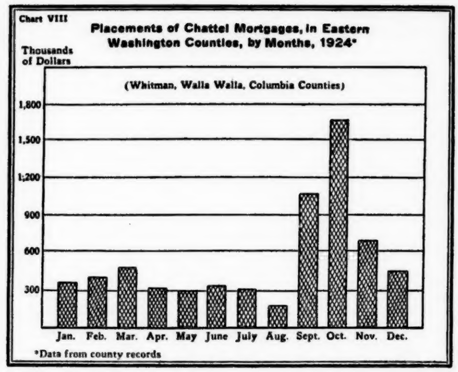
The pinch of taxation upon farmers since 1920 has been sharp, and it still hurts. These people are convinced that they have been paying more than their just share of taxes, and their protests have been loud but unavailing. They call attention to many well-authenticated cases in the district where from 20% to 40% of the gross income from farms has gone into the public treasury. They call this confiscation, and it must be admitted that farm tax burdens seem to



point in that direction. And yet there is great difficulty in proving what seems to be a fact. This much, however, is true beyond all doubt—the farmer has a form of property not easily hidden from the eye of the assessor; it is easily valued; and a land tax cannot be shifted. Moreover, the farmer is farthest removed from tax authorities and his protests, therefore, seem less immediate.

In three eastern Washington counties, comprising 85% of the farms in the region under discussion, there has been a definite shift to the farmers of higher assessed values than prevailed before 1920. Of this there is ample proof in the assessor's reports. In these reports it is possible to divide property into two classes: *farm property* (land and improvements) and *all other property*. From 1912 to 1915, a pre-war period, farm values were 50.4% of all values for state and county tax purposes, and all other property constituted 49.6%, practically a fifty-fifty division (Table VII).

From 1916 to 1919, the war period, this division remained practically unchanged, at 50.9% to 49.1%. That is, in these eight years of generally good times for all classes, the division between farm and other property values was very even. Note, however, what



happened in 1920 and after that year (Table VII). From that date to 1924, farm values have been 55.3% of all taxable values, while other property has dropped to 44.7%. Here is found a definite transfer of values, and hence a transfer of some portion of the tax burden, since upon these values a uniform tax rate is placed. For the yearly variations, see the accompanying graphical figure (Chart IX).

Put in another form, the same facts appear as follows: the yearly average assessed value of all farm land and improvements in the three counties from 1913 to 1919 amounted to approximately $42,500,000, but from 1920 to 1924, it amounted to $53,000,000 and over, an increase of 25%. For the same periods in the case of all other property, the increase was less than 2%.

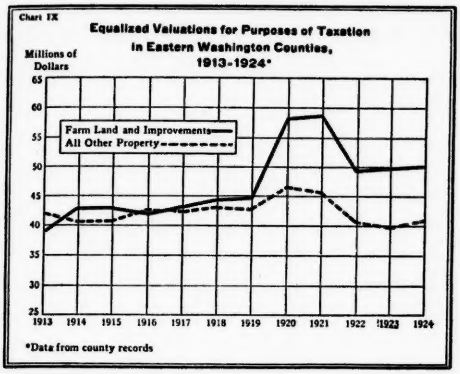
It is clear, then, that compared with other taxable property, farm property, in recent years, is offering a larger and larger fraction of total values for taxation. Why should this be? If for the seven years preceding 1920, a fifty-fifty relationship between these two classes of property was an equitable one, why should it not be after 1920?

The explanation appears in this form: On the tax books farm property values show an advance in 1920 of some 30%.

TABLE VII. EQUALIZED TOTAL VALUES OF ALL PROPERTY IN EASTERN WASHINGTON COUNTIES FOR PURPOSES OF STATE AND COUNTY TAXATION

Class	Before the War 1912-1915	During the War 1916-1919	After the War 1920-1924
All Agricultural Property......	50.4%	50.9%	55.3%
All Other Property	49.6%	49.1%	44.7%

Does not include personal property tax of the farmers.
Compiled from the *Annual Reports* of County Auditors.



Assessors justify this on the sale prices of lands. That these were highly inflated prices was no concern of theirs. It was, however, a matter of concern to all farmers who found themselves paying taxes on lands valued much beyond their productive earnings. Since 1920, although the actual value of land has fallen from 25% to 50%, yet for tax purposes, land is rated much higher than in 1917 and 1918. Only a part of wartime inflation has come out of it, so the tax records seem to show.

In the case of other property there was a very small war inflation—possibly 10% at the outside. Immediately thereafter its taxable values began to fall, and up to 1924 had fallen 12%. Its higher war values were entirely taken out and much more. For tax purposes other property now has a lower valuation than it has had for at least 10 years, except for the one year 1923. If the relationship existing in 1917, when both forms of property had almost exactly the same value, could be restored, the tax value of farm property would be reduced by 12% and other property advanced in its values 5%.

As a matter of fact, the relative real values of various kinds of property have not greatly changed in the last six years. There are the same farms, with the same sort of improvements, the same factories, stocks of merchandise, banks, town and city property, as existed in 1920. In addition the amount of invisible property has increased greatly. None will contend that any of these have lost in real values. It is only for the purposes of taxation that they appear to have gained or lost. The full truth in this matter will not be known until some scientific study is made. This much, however, can be said with assurance: Falling prices and increasing taxes came as a heavy burden upon agricultural groups and are important factors in their present predicament.

Trends in Farmer's Wheat Market

Finally, in this summary of the farmer's present status, comes the question of the market for wheat. Since 1920 an erratic wheat market has done much to wreck the farmer's legitimate expectations, for it followed no laws within his understanding. He could neither anticipate nor control market movements. In no period since the Civil War have greater price variations, often within a few weeks and without apparent reason, taken place. Only one principle seemed to hold with regularity — prices were low when the major part of the grower's wheat had to be marketed. Heavy interest charges, high machinery and labor costs pressed hard upon the farmer's heels and he had to market his crop immediately following the harvest, and then prices were always low. It is impossible to measure the losses occasioned by not hitting the market right. To say the least, they have been enormous. If some portion of these undeserved losses could have been prevented, at least in part, the farmer's plight today would be far different than it is. For this situation farmers cannot be held responsible.

Costs of Transporting Wheat

It is also important to note that high costs of transport must come out of the farmer's pocket. Unfortunately for eastern Oregon and Washington farmers, they are 300 or 400 miles from any primary market. They must take the price paid at that market, less the costs of transport to it. These costs have not been materially reduced since the war closed. Here, again, is a problem of much importance, the solution of which is not within the farmer's hands.

The above applies to every farmer, without reference to the kind of land occupied. But differences in land, as already noted, are of the most fundamental importance. To the users of the best lands, super-marginal land, problems press lightly, unless, perchance, new holdings were acquired in the war period. Those on good lands, marginal land, are in a very much more difficult situation, even though expansion and debt were avoided. The yields on such land are always seriously affected by a shortage of rain; on the whole, these farms are larger, and, therefore, the costs run higher. A larger fraction of these people are hard pressed by present situations and their affairs are problematical. As for the farmers on sub-marginal lands,[8] many of them have already given up the struggle, or are on the point of doing so. These become tenants on better lands or move away to the towns and cities. The question may be asked, why don't they stop raising wheat and go to a simpler kind of agriculture, for example, grazing? To the western farmer the reason is well known. This land, once robbed of its native grasses by cultivation, will not, so far as is now known, produce any forage plant—wild mustard alone seems to flourish.

[8] The large body of sub-marginal lands are in counties north and west of the counties discussed in this paper. Eventually this land will come under irrigation, it being within the Columbia basin project.

Economic Position of Tenants

As between owner and tenant, the latter is doubtless in the more difficult situation. Tenancy is rapidly increasing, as one of the results of large farms and high land values (Table VIII). The share system is nearly universal and this imposes upon the tenant a large capital outlay for implements and work animals, amounting to at least $5,000, usually more. Until he can accumulate this he is a heavy borrower, either of his landlord or at the bank. Tenants bear the full costs of production, and while their risks run no higher than for other farmers, they have less risk-carrying ability. Undoubtedly tenants are in a hard way and have been ever since the crash of 1920.

TABLE VIII. TENANCY IN FIVE EASTERN WASHINGTON COUNTIES*

Year	Total Number of Farms	Number of Farms Operated by Owner	Number of Farms Operated by Tenants	Percentage of Tenancy
1900	5,870	4,606	1,264	21.5%
1910	6,241	4,640	1,601	25.6
1920	6,072	3,943	2,129	35.0

* Data from *United States Census.*

If the foregoing is a true account of the farmers' present situation, the following facts should become impressive:

1. Problems differ widely among various classes of farmers and especially among those on different grades of land.
2. Some problems are of the farmers' own making and can be solved by them alone.
3. Others arise out of general economic conditions over which farmers have very little control, but from which they are very definite sufferers.

4. None of the causes of difficulty can be eliminated in a short time.

V. What These Farmers Are Thinking and Doing

The dark days of the wheat farmer class in eastern Washington began five years ago. Since then only passing rifts in the clouds have given hope for clearer skies. What have they been thinking in these years of adversity? What are they now doing?

The first year, 1920, although losses were severely felt, farmers were not greatly disturbed. They had long been accustomed to short-time reverses and the loss of one year's crop was, after all, not such a very serious matter. Next year, so they thought, things would improve. Europe would again come into the market for wheat, prices would surely advance, and costs of production would certainly fall. Things would be balanced speedily. In the meantime their debits at the bank were growing.

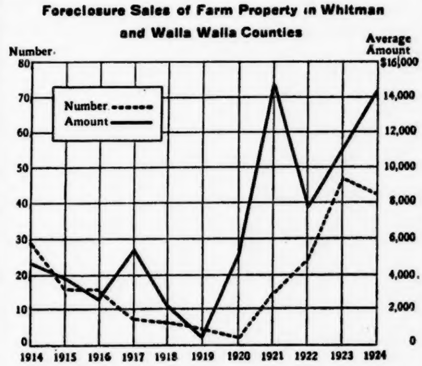
The year 1921 brought them a bumper crop, 58,000,000 bushels, but at enormous costs, for contrary to all expectations those things purchased by the farmer had not fallen in value very much. Taxes began to trouble them. The market was frightfully disappointing at 85 cents a bushel. Again nothing was made by wheat growers, and new and larger balances against them stood on the books of the banks. Farmers were now becoming seriously concerned.

In 1922 the crop fell off nearly one-half and the price advanced to the dollar point, while the average value of an acre of wheat was about $14, the lowest it had reached within the memory of most growers. Land values were falling rapidly and this troubled them, since nine-tenths of all their wealth was in land and improvements. There were a few sales and some of them were foreclosures, bringing only enough to satisfy the holder of the mortgage. Some began to think of Congressional relief and then it was that the McNary-Haugen idea was suggested and many looked in that direction hopefully. Both debts and taxes pressed hard. Farmers were now becoming desperate.

Then came, in 1923, the biggest wheat crop Washington ever harvested —about 62,000,000 bushels—but the lowest price since 1915. The cost of production still remained high. Only a very slight relief from the tax burden had come. Rising interest-bearing debts now became oppressive and the banks were becoming more reluctant to extend or make loans. There was an increasing number of foreclosures, bankruptcies were more frequent, and now and then suicide was used as a means of escape. The farmer was thoroughly disillusioned as to any hope of relief from Congress. To put the situation

Chart X:

Foreclosure Sales of Farm Property in Whitman and Walla Walla Counties



Sales under $1,000 not included

[4]In Whitman and Walla Walla counties the yearly average foreclosure sales made by the sheriffs were, in 1914-1915, $100,125; 1916-1920, $30,806; 1921-1924, $380,067; and in 1924, alone, $609,000 (see Table IX and Chart X).

in the mildest way, farmers were now frantic.

The Present Attitude

Farmers are now settling down to certain very definite conclusions. Some of these pertain to themselves, some to the rest of us. As for themselves, they are fully aware of every angle of their complicated situation. They know that there is no easy path before them, and they are therefore preparing resolutely for a decade of concentrated struggle. Faith in themselves, in their land, and in their product, no longer wavers.

First of all, they are studying the size of their farms. Do they have the right number of acres for economical farming? Some are coming to the conclusion that hitherto their acreage has been too large. In this period of struggle one fact stands out. The farmer who has shown the greatest endurance is the one who has operated a medium-sized farm, one of 300 to 600 acres, varying, of course, with local conditions. For such an acreage the family usually can provide its own labor force, or obtain it through neighborly exchange. The capital invested is smaller, enabling the farmer to have a cash working reserve of his own. Farm equipment is now available in suitable units for such a farm, and close personal attention can be given to every part of the business.

Another type of farmer has also shown fine qualities of endurance—the man who, when he goes to town, takes with him some salable product—a few pounds of butter, some eggs, a pig, a bushel or so of potatoes, and who tries to limit his purchases to his sales. Such farmers do not fear to meet the banker face to face.

These people recognize far more clearly than ever before that they must ponder carefully the price paid for land. They admit the folly of war inflation.

Present-day farmers are getting a new line on their expenditures. City homes, at considerable loss, are being disposed of, their owners returning to the land, there to give a more personal attention to the business of farming than they have for years. The "curbstone farmer" is less numerous on the city streets. They are beginning to think that, after all, our Washington winter climate is quite as good for the health and much better for the pocketbook than that of California, and that a low-powered car can operate fairly decently over our hill country. The tractor has lost much of its one-time popularity, and small types of the harvester and combine are proving both economical and efficient. Cooperative organizations and farm bureaus now seem much more worth while. The farmers' new psychology is preparing them for the conflict. They are willing to attack with undiminished vigor the problems of their own making. They now put up to the rest of us our part, for it is contended that there are some aspects of this business quite beyond their power to control.

Table IX. Foreclosure Sales of Farm Property in Whitman and Walla Walla Counties*

Year	Number	Average Amount
1914	29	$ 4,808
1915	16	3,800
1916	16	2,860
1917	9	5,099
1918	7	2,124
1919	4	572
1920	3	4,793
1921	16	15,572
1922	23	7,567
1923	46	11,059
1924	42	14,000

* Data from county records.

V. What the Nation Must Do

The farmers may do their full part, climatic conditions may swing into favorable cycles, yet agriculture may not become prosperous by these paths alone. There are some fundamental matters to which the public must give attention. Let us briefly review these. Take the matter of taxation, now resting as a great burden upon the agricultural classes. The power to vote taxes now rests with other classes, since, in most states, they have a voting majority. Until the general public is willing to deny itself in the interests of the agricultural classes, farmers must continue to carry loads greater than perhaps they ought to carry. Furthermore, the power to apportion the tax between farm property and other property deserves far greater attention than has been given in the past. It has been a very easy matter to shift upon farm property, because of its visibility, some of the load which might properly rest elsewhere.

The farmers are looking to the public for a more efficient marketing system than they now have. They tell us that under present conditions they cannot provide their own marketing machinery. Already their hands are overfull with problems, both intricate and difficult of solution. Clearly, they cannot at once create their own necessary cooperative agencies. These will come in due time, but it will require many years. In the meantime they must depend upon private marketing agencies, which are organized primarily for the advantage of other groups than those in agriculture. At best private agencies give the farmer a market so irregular, so uncertain in its movements, so expensive, and so filled with mystery that suspicions are almost necessarily aroused. Farmers believe that they are entitled to a more stabilized and more carefully safeguarded market. They believe that even the present system can be made passably good through an intelligent public interest and wise legislation.

Unbalanced Prices

Finally, our attention is called to the totally uneven relationship between the general price level and that prevailing for agricultural products. Farmers are large consumers of goods. They are also large buyers of capital goods in the form of tools and machinery which have not fallen in price since 1920. The same is true of lumber and hardware products. Nor has the price of money fallen. Everything of importance which farmers buy from the market is at a high price level; everything they sell at a lower price level. Moreover, all farm debts during the war were contracted under high prices when farm dollars bought very little, and farmers are now trying to pay these debts in low-priced farm products. For this disparity between price levels, farmers are very sure that they are not to be blamed. So far as they can see, they had nothing to do with it. Yet they are caught in the meshes of an economic problem which has done much to bring them to their present critical situation. They are wondering if somehow price levels may not be equalized.

Speaking for the farmers of eastern Washington, the writer is confident that they can and will find their way out of those problems which they themselves have made. They have had an experience which needs no repetition. But they cannot solve problems of general economic character, and at this point the responsibility of the public begins. These problems are intricate, difficult, and elusive, but nevertheless remediable.

INFLUENCE OF BUSINESS CYCLES ON UTILITY OPERATIONS

By A. E. PATTON AND O. GRESSENS

It is generally accepted that public utilities are sufficiently distinct in nature to have economic problems that are peculiarly their own. The financial problems, the operating problems, regulation, engineering, and public relations problems have been such as to distinguish the utilities from other businesses. Until recently, engineering problems, because of their significance and pressing nature, have tended to obscure other phases of utility management, with the result that an inadequate amount of rigorous study has been devoted to these other aspects. This has been particularly true of the economic problems in public utility management; too little intensive investigation and careful study of them have been made.

It has long been recognized, for example, that the electric light and power business has enjoyed comparatively greater financial stability and soundness from year to year than has the general run of industrial concerns. It has not been so markedly affected by changes in general business conditions. This characteristic has been held up as an advantage of the business; it has been set forth as an attraction to conservative managers and as an appeal to careful investors. One reason for this greater stability has been the daily necessity of electric service; another reason has been the natural and regular increase in the business, which has been due to the fact that the market has not yet become saturated. Careful study of the recent growth of the electric light and power industry, however, tends to indicate that an element of resiliency has been introduced and that the stability which has characterized it in the past may be somewhat modified.

Effect of Increasing Industrial Power Load

During the last five or six years, a great percentage of the growth of this industry has resulted from the development of industrial power. Although this development has made for economy in operation by evening the load, it introduces the uncertain problems of the business cycle and undoubtedly will cause the industry to become increasingly subject to the fluctuations in general business.

One of the problems, therefore, which is especially in need of detailed and scientific analysis is the effect of the business cycle on this utility, particularly upon its operations. The financial structures of many public utilities indicate that in practice the principle is accepted that alternating periods of prosperity and depression are less telling in their inroads into the revenues of public utilities than they are into the sales of ordinary industrial enterprises. The survival of these companies, many of which have been trading on thin equities, from severe depressions indicates the general soundness of this principle. A new problem, however, has been introduced by the development of industrial power as a result of which more systematic study will become imperative to the efficient conduct of the business.

Essential Data to Be Studied

In studying the effects of changing business conditions upon the electric light and power industry, several important considerations must be kept in mind. Such considerations may be considered as presuppositions which are to be substantiated by statistical evidence presented later. In the first place, revenues of these utilities do not react to changing prices as readily as do the sales of industrials. In contrast with other businesses, utilities are generally operated as monopolies and their rates are regulated. The effects of the business cycle on revenues, therefore, in so far as these effects are transmitted through price changes, are not direct. Second, the prevailing practice of adjusting rates for industrial power in accordance with the quantity consumed adds another difficulty because of the fact that the revenues of these utilities do not vary in direct proportion to the physical output. As an industry using electric power begins to feel a depression, it reduces the demand for service; and if the reduction in demand is great enough, it will be obliged to pay higher unit rates for a smaller amount of electric power. Under these circumstances, variations in the amount of revenues of a utility would not correlate directly with variations in physical output. Hence, even though the business cycle will eventually influence revenues, they do not furnish as satisfactory an index of the cyclical influences upon the business as do the data of the physical output.

In the case of cyclical movements, especially those which are chiefly monetary in their character, such as occurred in 1919 and 1920, revenues prove insufficient. On the other hand, physical output is not entirely satisfactory, for changes in monetary conditions are not directly reflected in them. These difficulties, however, do not render quantitative analysis useless. They necessitate that both the revenues and the physical output be studied together. For even though the comparatively rigid prices at which public utilities are forced to sell their services, irrespective of the changing economic conditions which are incident to the business cycle, do not immediately reflect price changes, nevertheless fluctuations in the demand on the part of consumers, which are caused by these changes, are reflected in the physical output and eventually in the revenues. In other words, increased use of power and light during periods of prosperity, and retrenchments during periods of depression, must necessarily be reflected in the output and finally in the revenues of these businesses.

To determine precisely the effects of cycles, however, the different classes of revenues should be differentiated and studied in isolation. This differentiation should also be observed in the study of the physical output.

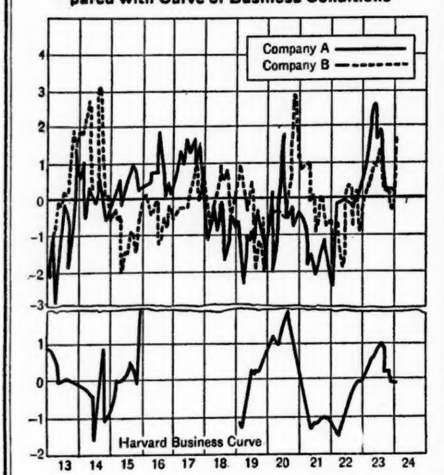
Operating expenses, on the other hand, constitute a more elastic element in these utilities. They tend to follow more closely than do the revenues the price changes which are incident to the cycle. In a complete study of the effects of the business cycle on these utilities, therefore, these data must also be analyzed, and studied together with the revenues and physical output.

Lastly, a study of the growth in number of customers should be made to determine whether such variations as occur in this business are due chiefly to variations in the number of customers, or to changes in the *per capita* consumption of service.

The following study was made of these various data in the cases of two of

Chart I

Cyclical Fluctuations of Gross Revenues Compared with Curve of Business Conditions



the largest electric utilities in the United States. The curves which are presented are the cycle curves of these data.[1]

Cyclical Effects on Revenues

Chart I presents the cycle curves of the total revenues of these two companies. On the whole, these curves show a great deal of similarity in their movements, with the exception of the year 1915, when the movements were in opposite directions. On the other hand, the timing of the movements was not always the same. When these two curves are compared with a curve of the general business cycle,[2] it can be seen at first glance that previous to 1919 there was not a great deal of sympathetic movement between the general business cycle and the cycles of these two utilities. Beginning with 1919, however, the cycle curves of these two companies begin to follow the movements of the general business cycle with surprising closeness. This is perhaps explained by the great strides which have been made in the development of industrial power in these years. The effects of this development have been undoubtedly to make the utilities increasingly sensitive to the fluctuations of general business conditions. The boom of 1920, which was in reality due to a tremendous inflation and was, in fact, a movement caused by the monetary conditions which obtained after the war, is registered in the cycle curves of these two utilities by a sudden, though not sustained, increase in monthly revenues. The subsequent depression and recovery are again faithfully reflected. To what extent, however, does the business cycle cut into the revenues of these companies?

The standard deviations of these fluctuations for company A and company B, respectively, are 3.850% and 4.057%. In other words, the most frequent fluctuations from normal for each of these companies were 3.850% and 4.057%, respectively.[3] It is evident, therefore, that the business cycle does affect the revenues of these companies and affects them in a manner increasingly in sympathy with the fluctuations of general business conditions, the extent of these

[1] In each case the data have been corrected for secular trend and for seasonal variation. The cycle fluctuations, after having been expressed in terms of "per cent of normal," have then been converted into units of standard deviation, in which form each series is comparable to any other series expressed in the same units. Fluctuations of the curves in the accompanying charts, therefore, represent the fluctuations above and below normal of the particular data in question as a result of the business cycle.

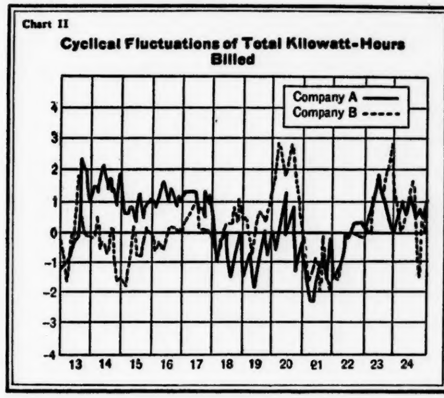
[2] The general business curve used in this connection is the one prepared by the Harvard Economic Service.

[3] The standard deviation in this case has been calculated about the *line of trend.* It thus represents the standard error from normal. Attention must be called to the fact, however, that the exact significance of the standard deviation in the case of a normal distribution in the theory of probability is not applicable here. The distribution of

fluctuations being measured in units of 3.850% and 4.057% of their normal revenues.

Fluctuations in Output

When attention is turned to the physical output, which in these cases is taken as the total number of kilowatt-hours billed to customers, very much the same results are obtained. In view of the regulated prices at which the utilities sell their services, it would seem more proper to study the cyclical variations of these enterprises in their physical output rather than in their gross revenues. Chart II, which presents the cyclical fluctuations of the kilowatt-hours billed to customers, does, in fact, show more uniform movements between these two companies, and more synchronous fluctuations with the general business cycle. Again it is noticeable that there was greater similarity of movements from 1919 on than was evidenced in the previous period, not only between these companies, but also between their output curves and the general business cycle. Furthermore, the movements in these curves are of greater magnitude and are more clearly defined than in the case of the gross revenue curves. The standard deviations of these data also reveal that the fluctuations in the physical output of these companies about their respective



norms are greater than the fluctuations in their gross revenues. The standard deviations of these companies, A and B, respectively, are 4.720% and 5.900%. Since all abnormal fluctuations have been eliminated in the analyses,[4] the kilowatt-hours sold thus reveal a somewhat greater variability in response to the change of business conditions.

Movements of Industrial Sales

The industrial light and power sales, the cyclical movements of which are graphically presented in Chart III, show a still greater harmony in their major movements than the two series just presented. This is true also when they are compared with the general business cycle. Beginning with 1919, the similarity in movements with re-

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(*Footnote 3 continued from page 42*)
the monthly fluctuations about the line of trend would have to be normal if this precise interpretation were to be placed on the standard deviation. Even if this were the case, however, it is questionable whether the definite interpretations from the theory of probability in the case of normal distributions in frequency series could be used in the case of time series. In the latter case, a normal distribution about a trend line would perhaps be due to the limits of the problem in hand, in other words, to coincidence, rather than offering a correct description of this distribution in general. Again, in the case of a time series, the emphasis has been displaced from the central characteristics of the distribution to the characteristics of the distribution *at one particular time*. The standard deviation, however, even if stripped to this exact mathematical interpretation, offers, nevertheless, a valuable device to describe the extent of the fluctuations from normal.

[4] Unusual monthly fluctuations which were obviously due to (1) an accounting error, or (2) purely sporadic fluctuations, were excluded in order that, as nearly as possible, a picture of the ordinary fluctuations from trend might be preserved.

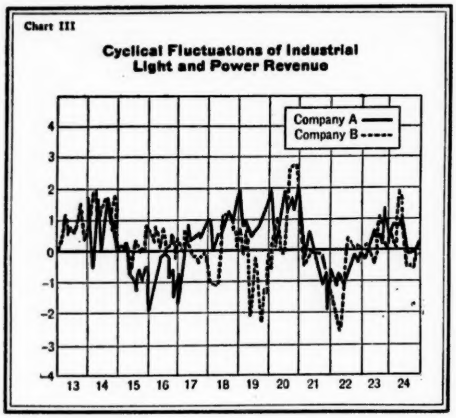


Chart III
Cyclical Fluctuations of Industrial Light and Power Revenue

spect to each other and to the business cycle is more marked than in the case of the other data.

This is the class of revenues into which the business cycle makes the greatest inroads. Manufacturing establishments are notedly more subject to fluctuating business conditions than are retail distribution establishments. In general, it holds true that there is a decrease in resiliency from the extractive industries down to the distributive industries. That part of public utility revenues which is dependent upon the operations of industrials, therefore, is most affected by the varying capacity at which these industrials are operated.

It is particularly noticeable that beginning in 1919 detailed fluctuations of the curves of income from the sale of industrial power show a high degree of correlation. This agreement in details is not nearly as marked in the case of the other data. One explanation may be that about this time great strides in the development of the use of industrial power were made.

The standard deviations of these data for companies A and B, respectively, are 4.751% and 6.928%. The fluctuations of the revenues from the sale of industrial power, in other words, are measured in units of 4.751% and 6.928%, respectively, of the normal revenues from these sources. These standard deviations indicate the greater amplitude of the fluctuations of these revenues than obtains in the case of the total revenues from the sale of electricity. This is explained, of course, by the fact that the total revenues include the income from the sale of retail light and power, which class of revenue shows a greater resistance to the ups and downs of the cycle. Revenue from retail light and power still makes up the major portion of the revenues of these two companies.

The industrial kilowatt-hours sold were not obtainable in the case of company B. For company A, the cyclical fluctuations of this series are graphically presented in Chart IV. The years of general depression and prosperity for the period covered by these data can be fairly accurately traced in this curve. When this chart is compared with the chart of the total kilowatt-hours sold for the same company, the same difference that was noticed between the total revenues and the industrial revenues is again apparent—a greater elasticity in the variations from normal. The fluctuations are, in fact, sharper than in the case of the revenues from the sale of this power. This can be explained, of course, on the basis of the graduated rates which are in general use; reduction in demand for industrial light and power during depression subjects the customer to higher unit rates, and hence revenues accruing to the utility do not fluctuate so sharply as do kilowatt-hours billed. The standard deviation of this series is 7.64%, indicating that the widths of the fluctuations which take place are much greater than in the case of any of the other data. This is to be expected for the same reason that a

greater fluctuation is to be expected in the revenue from this source.

Variations in Total Number of Customers

In Chart V are presented the variations from normal of the total number of customers of these two companies. The fluctuations in these series present some marked differences from those of the other series already examined. The peaks in these cases occur earlier—in 1916 and 1917. In 1918 there was a decided slump in the customer cycle, due perhaps to the fuel economy which was being practiced during 1918 and 1919 on account of the exigencies of war conditions. The cycle curves did not reach normal again until 1922 and 1923 for companies A and B respectively. The peak, which was reached in 1920 for total kilowatt-hours sold and which was reflected also in the revenues of these companies, has no counterpart in the cyclical variations of the number of customers, although in the case of company A there was a sharp increase in the number of customers toward the end of the year. This was not, however, what could be termed a cycle peak.

Chart IV

Cyclical Fluctuations of Industrial Light and Power
Kilowatt-Hours Billed
Company A

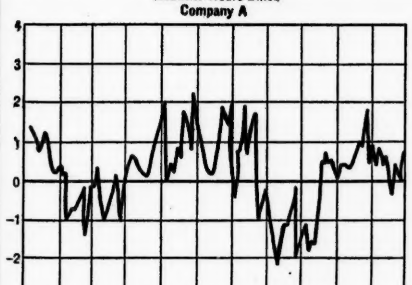
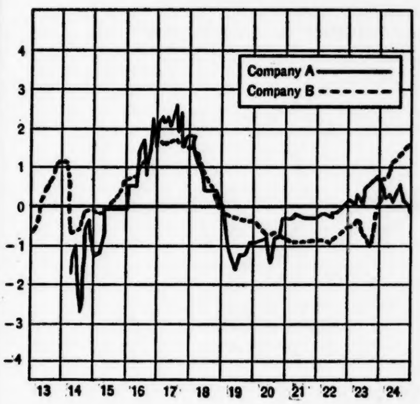


Chart V

Cyclical Fluctuations in Total Number of Customers



From a comparison of the charts it can readily be seen that the cyclical variations which occur in these two utilities are least pronounced in the variations of the number of consumers. There is apparently, therefore, less fluctuation in the number of customers than there is in the *per capita* consumption of electricity. There is, nevertheless, quite a difference in the magnitude of the customer fluctuations of these two companies. In the case of company A, the standard deviation of this series is 2.418%, while in the case of company B, the standard deviation is 5.192%.

Effect of Cycles on Number of Industrial Customers

To be complete the study of the customers should be broken up into a study of retail customers and industrial customers. Such data, however, were available only in the case of company A, and are presented in Chart VI. Beginning in 1917 the typical cycle years can be fairly accurately traced in this curve of industrial customers. The

number of industrial customers thus shows a much greater flexibility in response to general conditions than does the number of total customers. The standard deviation of this series is 2.534%. The magnitude of the fluctuations is, therefore, not very significant.

Influence of Cycles on Operating Expenses

Finally, the effects of the business cycle upon operating expenses must be studied. This study is presented in Chart VII. Again, operating expenses were not available in satisfactory monthly form for company B. Chart VII, therefore, presents the cyclical variations of the operating expenses of company A, together with the variations of the total revenues of the same company.

The chart shows at once that the fluctuations of the operating expenses are greater in amplitude than are the fluctuations of the gross revenues. There is also a lag in time between the revenues and the expenses; operating expenses show a tendency to follow the movements of the revenues after the lapse of several months. The standard deviation of the operating expenses is 8.037% as compared with 3.850% for the gross revenues. There is thus much greater scope in the fluctuations of the expenses than there is in the fluctuations of the revenues. Here, then, is a place where the effects of the cycle are felt rather keenly by this company. Operating expenses can move in sympathy with changing conditions, especially changing monetary conditions, while there are no corresponding changes in the revenues which might be effective through prices. The cost of operation cannot be effectively regulated by governmental bodies and, consequently, moves in sympathy with market conditions. On the other hand, rates are changed only on authority from regulatory bodies. Revenues are, therefore, necessarily more inelastic.

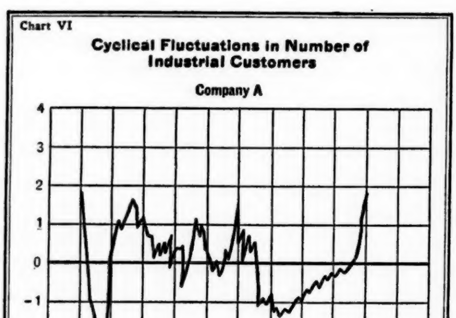


Chart VI
Cyclical Fluctuations in Number of Industrial Customers
Company A

From this analysis it is evident that these two companies are becoming increasingly more subject to the influences of cyclical variations in general business conditions. Since 1919 they have evidenced a greater synchronous movement than before. The influences are manifested not only in the revenues of the companies, but to a greater extent in the physical output, to some smaller extent in the number of customers, but to the greatest extent in operating expenses.

In the case of the customer fluctuations, the variations of the number of actual customers are not as significant as the variations in per customer consumption of electricity. The number of customers may not change materially with changing business conditions, but their use of the service varies with their buying power.

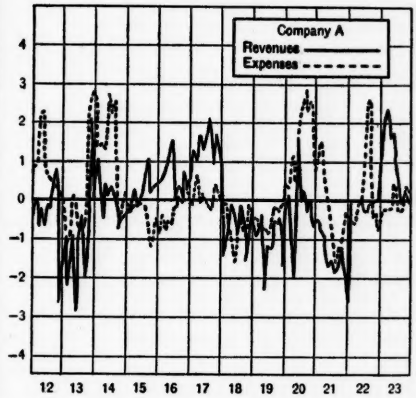
Problems which are incident to the electric light and power industry, therefore, probably cannot be divorced from

general business problems, and the evidence in the case of these two companies is that the problems are becoming increasingly similar to those of general business. Present indications are that the greatest future development of the electric light and power industry will be in the field of industrial power. Sustained efforts to interconnect electric systems, to bring about diversification of load, and to improve load factors will constantly increase the importance of industrial power to these utilities, and, consequently, will make them more subject to the influences which affect their industrial customers.

If the business cycle would affect industries in such a manner as to cause a lag between various industries sufficient to permit the recovery of one industry from a depression before another industry would be affected by it, then the interconnection of electric utilities would be a means to save them from the effects of these economic oscillations. The business cycle, however, does not ordinarily proceed in a sequence of wave motions from industry to industry. Although there is a definite lag in the response of certain industries to conditions which cause either abnormal prosperity or depression, yet the history of business cycles definitely shows that there are peak and slump periods when all industries are either buoyant or depressed. In a period of prosperity the electric utilities, interconnected or otherwise, would have to furnish sufficient generating equipment to handle the load. It is true that, through interconnection, companies can work out elaborate schemes of diversification, which obviate the necessity of carrying a high percentage of reserve capacity. They must furnish, however, sufficient generating capacity to handle all industries

Chart VII

Cyclical Variations of Operating Expenses and Revenues



in times of prosperity. This necessarily means that when a depression sets in there will be idle equipment and decreased revenues.

The continued efforts in developing elaborate interconnections will probably tend to involve the utilities deeper and deeper in the problems incident to the business cycle. In their anxiety to work out diversification, they may take on an increasing number of off-peak industrials. This will tend to make the whole interconnected system more dependent upon the industrial load, and anything that will affect any one of these industries will affect the electric system, unless a new industry can immediately be found to take its place.

It is probable, therefore, that the stability which has characterized the industry in the past will not characterize it to such a marked extent in the future. If this proves to be true, many of the present principles of the economics of public utilities will undoubtedly change, and one of the most important of these changes will be in the principles governing public utility finance.

BANK FAILURES IN IOWA

By FRED L. GARLOCK

DURING the past few years it has been common knowledge that many country banks have been in straitened circumstances and that failures have been numerous. Observers of the situation have attributed these difficulties to unwise banking practices during the time of high prices immediately following the war. Some, more specifically, have laid the blame on those farmers who pressed their bankers for loans to finance the purchase of farm land at inflated prices; some have stressed the fact that bankers not only supported but also lent encouragement to these practices; and others ambiguously have named the "human equation" as the significant factor. To obtain a clearer picture of this troubled experience was the purpose of this study of bank failures in Iowa, where bankers' and farmers' distress has been particularly acute.

Prior to the year 1917, when the Iowa banking department was established, statistics bearing on the subject of bank failures in Iowa were fragmentary. Banking institutions, during this period, were under the supervision of the state auditor, whose many other duties, together with the necessities of economy, precluded the compiling and publication of thorough-going statistics. Excepting occasional reference to conditions of insolvency, failures were not segregated but were included in a group which was designated "liquidations." Since the establishment of the state banking department, however, the scope and classification of statistics have advanced materially, so that fairly accurate information may be had concerning failures since 1917.

Extent of Bank Failures

It is noteworthy that in the last report of the auditor which contained bank statistics, issued in 1916 and covering the period June 30, 1914, to June 30, 1916, the statement appears that there had been only one failure among Iowa banks since 1907. The first report of the banking department, which covered both 1917 and 1918, makes notation of one failure in the latter year. The next year there were three failures; and in 1920 there was one. This is not an unusual record for a state having an average, during the period 1917 to 1920, of more than a thousand banks under its supervision, many of which were small and but recently organized.

It would appear that the failed bank era did not open in Iowa until 1921. In that year there were 15 failures, and numerous other banks were reported to be in trouble. During the next year only 4 banks were closed; but in 1923 the number rose to 24; in 1924 it reached 64; and from January to July, 1925, 23 banks had failed. The total number of failures among banks organized under the state law is 135. To this number should be added some 40 failures among private banks and a few among national institutions.

Bank failures are significant not only because of their serious consequences, but also for the reason that they reflect general banking and business conditions.

An occasional bank failure is a natural result of lack of enterprise, but an epidemic of failures clearly indicates the existence of unusual conditions which have played upon inherent weaknesses in a banking system. The failure of approximately one-tenth of all Iowa banks is by no means a normal mortality; it has provoked a searching inquiry into the conditions which have brought about the downfall of these institutions and is responsible for a considerable body of legislation enacted with the object of strengthening the banking system of the state in such manner as to render it less susceptible to the recurrence of similar conditions in the future.

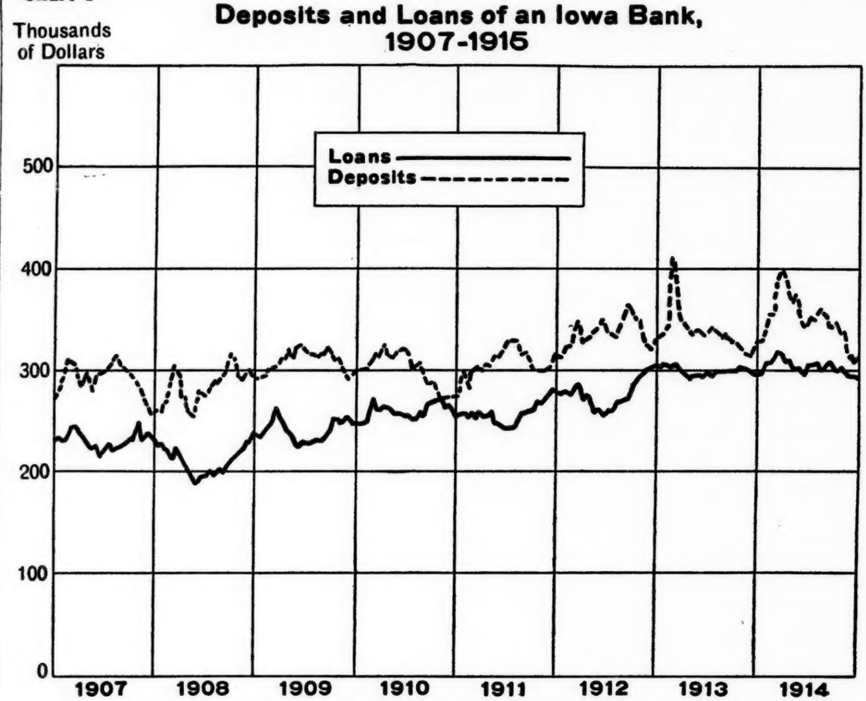
While some of these measures have been wisely taken, there are grounds for believing that the respective provinces of the independent banker, the law, banking supervision, and group action by the bankers, are not fully apprehended. Reform effort has centered in means of protecting banks against destructive economic tendencies rather than in means of controlling these tendencies. Not until the close relationship between the conditions of banks and those of their customers is clearly recognized will efforts of this character have any large measure of success. In the attempt to clarify these issues, the following discussion will (1) present the story of Iowa banking during and immediately preceding the failure era; (2) analyze this evidence with the view of determining the causes of failure; and finally, (3) suggest the general direction which must be taken by reform measures.

I. Banking in Iowa (1915-1925)

The period of inflation. Prior to 1915, and before the influences of the war were plainly felt in Iowa, conditions of banking had been comparatively stable for a considerable period of time. It was generally accepted among prudent bankers, as a principle of sound practice, that interbank borrowing should be resorted to only for the purpose of meeting seasonal or temporary needs. Not all bankers adhered to the policy, to be sure, but most of them admitted its wisdom. Ordinarily, therefore, since reserves were somewhat in excess of total capital investments, deposits in the well-managed bank without circulation averaged somewhat more in amount than loans and investments. It was not difficult to estimate with fair accuracy the seasonal demands of borrowers and the fluctuations of deposits and reserves. Chart I shows these relationships in a typical, small Iowa bank. The analysis of values and of borrowers' conditions was rendered of little difficulty by the stability of business conditions.

With the coming of rising prices about the beginning of 1915, however, the incomes of bank customers began to swell and bank deposits started the upward climb which was not to end until early in 1920. This period, from 1915 to 1920, as indicated in Chart II, brought new conditions which invalidated the estimates of most bankers and caused many to abandon them altogether. Experience had taught the country bankers that heavy lending during the fall and early winter would be accompanied by a considerable loss of deposits and reserves, as during these seasons there is a balance of buying in favor of other sections of the country. They had also learned that loans were reduced during the late winter and early spring, while, during this period and the summer, deposits and reserves were wont to expand.

Chart I



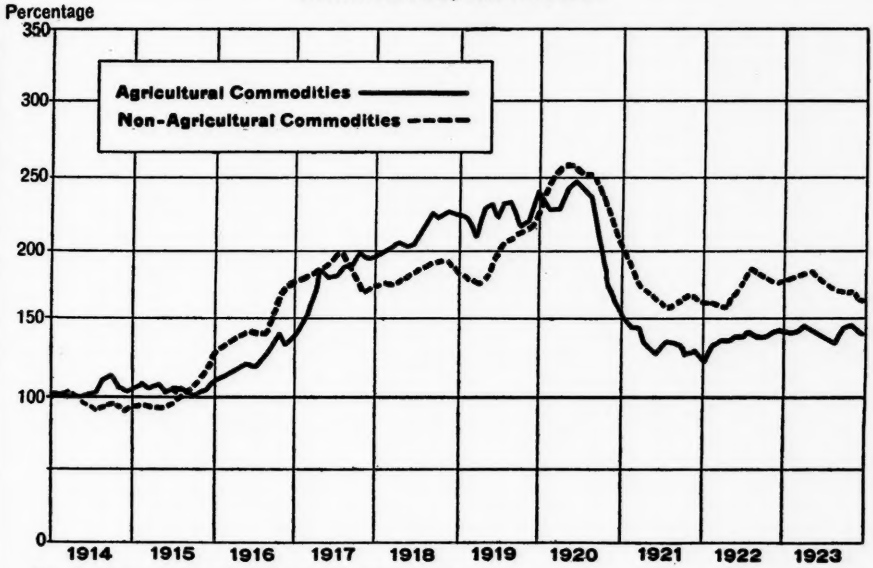
Data are from actual readings, on first and fifteenth day of each month, of deposits and loans as given by the daily statement of condition.

The large volume of loans made in the autumn of 1915 and the years thereafter, however, did not produce reductions of deposits and reserves at all commensurate with their expectations. Increasing receipts, which were due to rising prices, had tended to neutralize the drafts; and, similarly, deposits increased during the summers to amounts which again upset their predictions. Banks which had been chronic borrowers found the problem of liquidation solved by the unusually large supply of loanable funds which came to them, while those which were infrequent borrowers found it necessary, in order to employ their funds profitably, to encourage borrowing by their customers.

Rising prices affected both banks and their customers with an optimism which swept aside the conservative standards of experience and promoted extravagance and speculation. Whatever the customers purchased, whether merchandise or land, they were able to sell at an extraordinary profit; whatever was produced on their farms brought unusual returns. Some few persons, uncertain of what disposition should be made of the unexpected harvest, began reducing their fixed indebtedness. It was not long, however, until the continuously rising prices, the encouragement of the bankers, and the methods used by the government in selling war securities, had convinced the majority

Chart II

Trend of Price Indexes of Agricultural and Non-Agricultural Commodities, 1914-1924

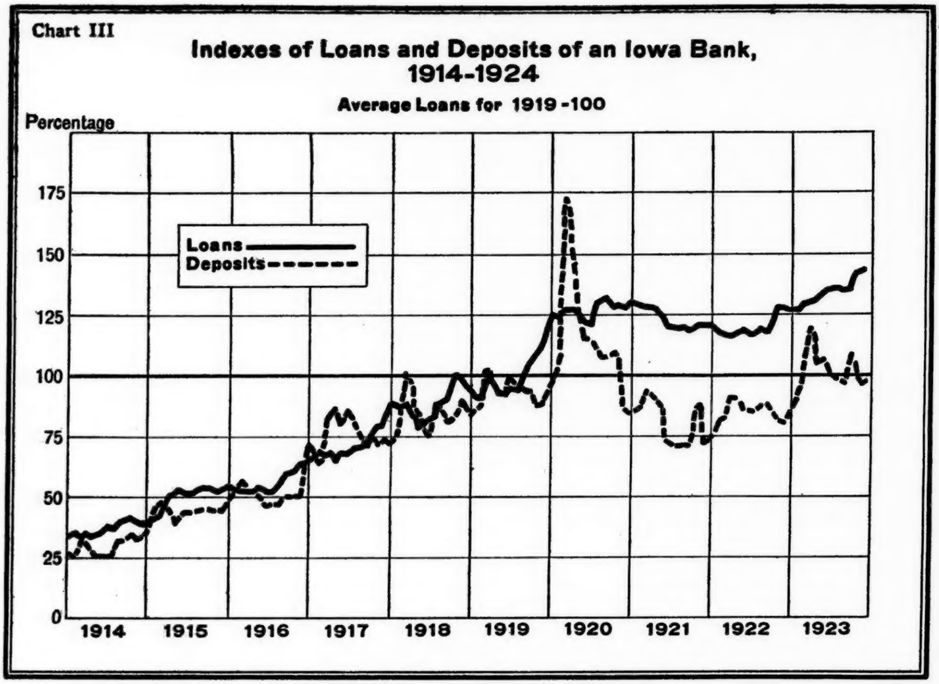


Data are taken from *Monthly Labor Review* of United States Department of Labor, February, 1925, p. 54.

that debt was a blessing in disguise, as it became progressively easier to liquidate and offered a means of extending profit-making activities. Under the urge of these influences, industry expanded and thrived, promoters of all types came into their own, and thrift gave way to extravagance. Bankers found their accustomed standards of credit analysis growing obsolete, for values increased automatically with the passing of time. Hence it was that, as the speculative fever gained a foothold and grew and the demands for bank funds enlarged, credit was extended to all manner of persons on—or without—all kinds of security, excess lines became commonplace, customers' notes given to promoters of questionable and fraudulent enterprises were discounted for rich rewards, and large sums were advanced to land speculators. Borrowing for the purpose of relending became an established practice. Time and time again the banks were saved from the effects of their ill-advised acts by the continuous growth of deposits. As the period drew to an end, during late 1919 and early 1920, caution was thrown to the wind by both bankers and their customers, speculation became rife, an enormous burden of debt was contracted, and economy was lost in a swirl of extravagance.

An investigation by the United States Department of Agriculture [1] shows the following numbers of sales of improved

[1] Gray, L. C., and Lloyd, O. G., *Farm Land Values in Iowa,* United States Department of Agriculture Bulletin, 1920, No. 874, pp. 5, 9.



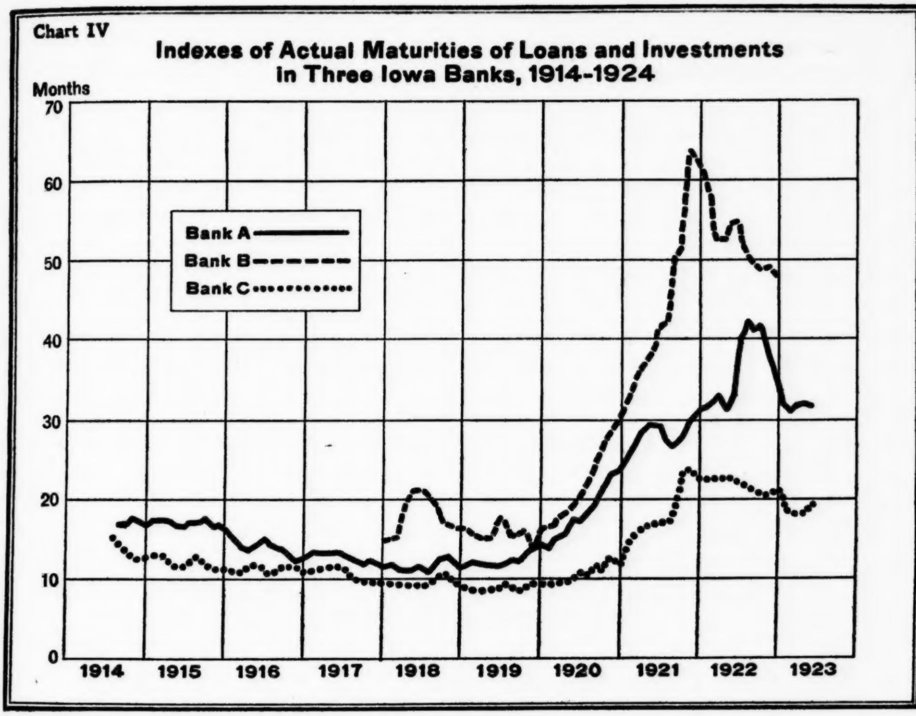
These indexes were obtained by dividing the respective actual readings of loans and deposits of an Iowa bank by the average of loans for the year 1919. The 100% line, therefore, represents the average level of loans for 1919. In a very rough sense, the excess of loans over deposits represents the amount of borrowing from other banks. The particular bank selected for this chart has been successful in maintaining solvency but has had some harassing experiences.

land in 60 Iowa counties in 1919: January to March, inclusive, 127; April, 120; May, 244; June, 382; July, 367, August, 158; September, 16. Average prices per acre during these corresponding months were reported as follows: $237, $240, $238, $247, $255, $259, and $276. Furthermore, of 1,024 farms reported sold between January 1, 1919, and August, 1919, more than 30% were resold one or more times.

This activity in the farm lands market seems understandable when we look back at the relative price movements of that period. The prices of agricultural products rose more rapidly than the prices of the things that the farmers had to buy. In other words, gross earnings increased faster than expenses, leaving an ever-widening margin of net earnings. It is small wonder that land prices based upon these growing net earnings should be asked for and paid.

The period of depression. Had prices continued rising, little may be said except that the ultimate break would have been deferred. Permanent prosperity cannot be built on an economy which is characterized principally by extravagance and speculation. The break came, however, early in 1920. After a lull about the first of the year, during which careful observers began upon programs of retrenchment, prices

Chart IV



The indexes were derived by dividing the 12-point moving averages of monthly readings of loans and investments in each of the three banks by the 12-point moving averages of their respective collections and sales per month of these loans and investments. All partial and full renewals were eliminated. The trend of actual maturities in Bank A approximates the average trend as reflected by 23 banks which were included in the study. Bank B failed during the latter part of 1923. Bank C has maintained a strong position throughout the entire period, 1914-1924. In a rough sense, this chart reflects the degree to which assets became "frozen."

suddenly broke and fell wildly until the middle of 1921, when the decline was halted (see Chart II).

Unfortunately for Iowa, agricultural prices dropped farther than did the prices of most other commodities. Farm incomes dwindled rapidly, becoming insufficient, in numerous instances, to meet fixed charges. Hence, the liquidation of fixed indebtedness was rendered impossible; current debts were only partially liquidated. To add to the difficulties of debtors and to the discomfiture of banks, a large proportion of what had been regarded as current indebtedness was converted by falling prices into fixed indebtedness which would have to be paid, if ever, in the distant future. This resulted in the condition of banks' assets which has been termed "frozen." Nor was there much of a disposition to liquidate; on the contrary, borrowers were insistent in their demands for more accommodation in order to hold their products for better prices. It was a demoralizing period; one which was characterized by default, bankruptcy, reversion of land, and political disquiet.

Its effects on the banks were paralyzing. Large interest payments to companies holding Iowa mortgages, most of them located in other states, and withdrawals of deposits to bridge the gap between income and expenditure, caused customers' balances to fade away and bank reserves to become rapidly depleted (see Chart III). There were only three methods by which reserves could be maintained; by liquidating assets, by attracting new deposits to offset the effect of withdrawals, and by borrowing from other institutions.

It is a matter of history that liquidation did not suffice in Iowa as a means of weathering the storm. The offering of high rates to time and savings depositors had some effect in encouraging economy and enabled some Iowa banks to attract the deposits of others which did not engage in the practice, but its chief effect was to increase the operating expenses of banks. As a means of maintaining reserves it likewise fell far short of requirements. Virtually all banks were forced to borrow. Most of them were able to get the assistance that was needed during the period of reserve stress, and, by capital assessments and passing of dividends, charged off a sufficient amount of their losses so that they now may be regarded as solvent. Banks which had exhausted their borrowing power during the period of inflation and those which have been unable to make provision for their losses, however, have been forced to extreme limits. A small number of them early succumbed under the strain; others, receiving partial assistance, continued the struggle for a time but later fell into receivership. The majority of failures, as has been seen, occurred during the period, 1923 to 1925, several years after the price decline had been halted.

II. Causes of Failure

Immediate causes. The most commonly cited cause of bank failures is "frozen assets"; actually the most common cause is worthless or exceedingly doubtful assets. The term "frozen" is applied to assets which are slow and difficult to liquidate, but since liquidation, as used in this sense, has reference to both collection and sale, it may properly be said that such assets are both uncollectible and unsalable. Usually it is possible to liquidate assets of unquestionable quality by sale, or to borrow by pledging them as security, even if immediate collection is impossible; this constitutes the basis of numerous legitimate banking operations; and there is little reason for any bank to fail when in possession of such assets. This has been particularly true during the last two years, when most of our failures have occurred, for the low interest rates which have prevailed attest the abundance of funds available for investment in high-grade securities.

Towards some forms of investment, of course, the market has been wary. It has been difficult of late to sell land at more than a moderate price, and the farm loan companies have been loathe to lend more than $90 per acre on the best of land. This is a marked contrast to the period of peak prices when loans were made on high-priced land, a large element of the security being the expectation that agricultural prices would maintain the same high level. The sale of second and third mortgages has also involved sacrificial discounts. The very character of these market forces has rendered the "other real estate" holdings of banks, and their paper secured by junior liens on land, unsalable; and, owing to recent price conditions, much of the paper has been uncollectible also.

While the recovery of the market for land and increased prices for farm products undoubtedly would improve the quality of these assets, temporarily at least they must be regarded as of doubtful value. Large amounts are palpably worthless.

This interpretation of frozen assets is corroborated by the fact that most of the failures occurred, not during the period of greatest reserve stress, but several years later when conditions were much improved. There can be no question of the availability of credit during the years 1920, 1921, and 1922 to Iowa banks which could offer assets of good quality as security, yet these were the years when credit conditions were most straitened. It is inconceivable that in the later period of comparatively easy credit this support should have been withdrawn, and the fact that it was not withdrawn is attested by the many banks which are still heavy borrowers. The conclusion is unavoidable that "frozen assets" has reference mainly to doubtful or worthless assets.

This condition of bank assets developed, as has been brought out, during the period of agricultural and business depression. It was perhaps caused mainly by the fact that land and commodity prices, together with farm incomes, fell far below their former levels. But it may also be ascribed to the unwise lending policies which were prevalent during the period of inflation. The most common offense of bankers was the failure to analyze borrowers' conditions. It would be difficult to estimate the vast sums which were lent on the basis of nothing more than a faint suspicion of borrowers' net worth or earning capacity. Second, credit was extended in many cases when it was known that the borrower was a doubtful risk. This practice resulted from the intense competition for business which developed among bankers with surplus loanable funds during the extravagant years of 1919 and 1920. A third serious error was in granting excess lines of credit, the result of which is that numerous banks have been plunged into insolvency by the failure of a mere handful of their borrowers. The financing of promoters of speculative and fraudulent enterprises, by discounting the notes they had taken from local customers, has subjected many banks to heavy losses from contested paper, and has further contributed to their failure by depriving them of deposits which might have come to them had their customers invested in conservative securities. A further practice which may be regarded as unwise was the failure of bankers to carry in their portfolios a body of readily marketable securities which might serve as a reserve in case their cash resources were exhausted by any sudden or unusual events.

Most of the other immediate causes of failure are, at least in part, outgrowths of the condition of bank assets. Capital impairment has resulted from the losses which were sustained; failure to earn adequate income is the consequence both of the losses and of the organization of banks in places where the volume of business was insufficient to justify their existence. The depletion of reserves, while primarily due to the withdrawals of deposits which occurred during 1920 and 1921, could have been prevented if the assets had been liquid. The exhaustion of borrowing power was caused largely by the lack of good paper and salable securities. Probably the majority of cases of defalcation by bank officers were due to the hope that a temporary deviation from accepted standards of conduct might enable banks to weather the storm rather than to the

deliberate criminal intent of robbing bank creditors. Most of the runs by depositors have resulted from the inability of banks to meet the legitimate credit requirements of their communities, which in turn was caused by the condition of bank assets and which gave reason for the belief that the banks were in doubtful positions.

Fundamental causes. From this brief sketch of the causes immediately responsible for failure, it is manifest that during the period of rising prices bankers were guilty of many infractions of sound practice and that falling prices not only subjected them to unusual conditions of stress, but found many of them unprepared and unable to maintain solvency. Yet this knowledge is only superficial; there remain to be explained the reasons why the bankers, forsaking the practices that once had been regarded as sound, became parties to the speculation and extravagance of 1919 and 1920, why the state department of banking did not exert some restraint on the banks under its supervision, and why inflation and depression occurred. Unless these fundamental questions are analyzed and solved, there is little prospect of avoiding a recurrence of the recent epidemic of failures when similar conditions present themselves in the future. It will be helpful, in making this analysis, to discuss the general characteristics of the Iowa banking system, the law under which it has developed, and the types of bankers it has produced. And it will be necessary, in order to ascertain causes of inflation and deflation, to search into conditions which were not peculiar to Iowa.

1. *The Iowa banking system.* Iowa, under a policy of free banking, has developed what may be called a small unit, independent bank system. Its characteristics are a great number of very small institutions, operating independently of each other, and subject to little restraint either in the matter of chartering or of conduct of business. The strength of the system lies in democracy of control. The capital of the banks, with few exceptions, is subscribed by the communities within which they do business; the interests of the officers are localized; and the funds of any community are used for the development of its own industries. With such a system it is hoped to escape the monopolistic influences of the great branch systems, to make communities independent, and to protect the public from the foreign magnate.

2. *The Iowa banking law.* The law under which the system developed prior to 1920 was designed to secure all of these advantages for the public. Branch banking was not permitted, but provision was made instead for the chartering of three types of independent banking institutions: trust companies, state banks, and savings banks.[2] As the system worked out, the principal service was rendered by the banks, for in 1920 there were 934 savings banks, 389 state banks, and only 23 trust companies.[3] In the discussion which follows reference will be mainly to the state and savings banks. Trust companies are few in number, are of relatively large size, and in other important respects are not comparable with the general run of banks in the state. Why provision was made for two types of banks is not entirely clear. The conditions under which they have operated are essentially the same, the major exception being that savings banks were

[2] Banking law, 1921, Sec. 1861, 1840; and general corporation law.

[3] *Annual Report* of Superintendent of Banking, 1920.

allowed to organize with a minimum capital of $10,000, whereas a minimum of $25,000 was required of state banks.[4]

Very broad powers were granted to state banks in their selection of types of business, as is shown by the provision which authorized their organization and which contained virtually the only clauses relating to types of business to be found in the law.[5]

Sec. 1861. Name of state banks. Associations organized under the general incorporation laws of this state for transacting a banking business, buying or selling exchange, receiving deposits, discounting notes and bills, other than savings banks, shall be designated state banks, and shall have the word "state" incorporated in and made a part of the name of such corporation, and no such corporation shall be authorized to transact business unless the provisions of this code have been complied with. (21 G. A., ch. 72.)

After carefully prescribing the types of securities in which savings banks should be permitted to invest,[6] the law, by the following provision,[7] opened the doors to an almost unrestricted business.

It may discount, purchase, sell, and make loans upon commercial paper, notes, bills of exchange, drafts, or any other personal or public security, but shall not purchase, hold or make loans upon the shares of its capital stock.

That the restrictions on investments of savings banks have been of negligible practical importance is shown by the fact that in 1920, of the total assets of $509,691,439.72 less than $33,000,000 was represented by investments of all kinds, exclusive of loans and discounts.[8]

Capital requirements were made sufficiently low, as is shown in Table I, to permit the organization of banks in the

TABLE I. CAPITAL REQUIREMENTS OF IOWA BANKS

	Population of Town or City	Minimum Capital
Savings banks*	1,000 or less	$10,000
	1,000 to 2,000	15,000
	2,000 to 10,000	25,000
	10,000 and more	50,000
State banks†	Less than 3,000	25,000
	3,000 and more	50,000

*Banking law, 1921, Sec. 1843.
†*Ibid.*, Sec. 1864.

smallest communities and to provide every opportunity for competition in towns and cities of larger size. A simple illustration will make this clear. In an ordinary Iowa town of 1,000 population, the combined capital of the banks is seldom less than $75,000; frequently it is considerably more. If it is assumed that a larger number of institutions can operate profitably on the same volume of business that warrants this investment in the two or three banks which are usually found in a place of this size—the assumption is not entirely justified—it is obvious that at least seven savings banks of $10,000 capital each, or three state banks of $25,000 capital each, might be established and do a profitable business in such a town. The law, of course, made no specification as to the number of banks which might be organized. The significant point is that the doors were opened wide to the organization of a great number of very small institutions.

Liberality was manifested also in the requirements of eligibility and the affixing of liabilities to directors. The stockholding requirements of directors were placed exceedingly low, as is shown in Table II, so that the minimum requirement of eligibility to the directorate

[4] Banking law, 1921, Sec. 1843, and 1864.

[5] Banking law, Sec. 1861.

[6] *Ibid.*, Sec. 1850, par. 1, 2, 3, 4, 5, and 7, and Sec. 1850*a*.

[7] *Ibid.*, Sec. 1850, par. 6.

[8] *Annual Report* of Superintendent of Banking, 1920.

TABLE II. STOCKHOLDING REQUIREMENTS OF DIRECTORS OF IOWA BANKS

For Eligibility to Directorate of	Capital of Banks	Minimum Share Ownership
Savings banks*	Less than $20,000	1%
	$20,000 to $30,000	2
	30,000 to 40,000	3
	40,000 to 50,000	4
	50,000 and more	5
State banks†	25,000 to 30,000	2
	30,000 to 40,000	3
	40,000 to 50,000	4
	50,000 and more	5

*Banking law, 1921, Sec. 1845.
†*Ibid.*, Sec. 1866.

was the ownership of approximately 1% of the capital stock of a bank. And although the excess line limit was set at the exceedingly high level of 20% of capital and surplus, no distinct liability was affixed to directors in cases of violation.[9]

In the establishment of the state banking department, bureaucratic control was carefully guarded against. The expenses of the department were limited in amount to the fees collected from the banks,[10] and these were regulated by law.[11] Examiners were restricted in number to one for every 100 banks.[12] No discretionary powers were granted to the Superintendent of Banking in the organization of banks, so that if capital requirements were met, he had no choice but to issue a permit to commence business. He was specifically granted the power, however, to close banks which were considered to be in an insolvent condition.[13]

Nor did the banking department, in its administration, violate the liberal purposes of the law. A balance was struck between the number of examinations given, and their thoroughness, so that on the average each bank was visited somewhat less than once a year, its cash counted, reconcilement of correspondent balances made, the accounts checked, and a cursory examination made of the portfolio of notes and securities. This was probably all that could be accomplished, in view of the limited number of examiners and the fees which were permitted by the law. Call statements of condition were required quarterly and statements of income and expense semiannually, but the personnel of the department was inadequate to the task of thoroughly analyzing these data. It was a practice, at times, to notify the banks in advance of an impending call so that windows could be washed for the occasion. No conservative standards of practice were laid down by the department; and many banks in hazardous condition were allowed to continue their disastrous courses without restraint.

3. *The development of banking.* As a consequence of the liberal banking law and mild supervision, the banking business in Iowa flourished and expanded, attaining the height of its career, under the subtle influences of the inflation period, in the year 1920. In that year there were about 1,300 banking institutions under state supervision, two-thirds of which were capitalized at less than $50,000 each and had total resources of less than $500,000 each.[14] As has been said, deposits were large and expanding, credit was extended with little reference to security, banks borrowed vast sums for the purpose of lending at the high rates which then prevailed. The people of the state

[9] Banking law, 1921, Sec. 1870.

[10] Act of 37-year assembly, Chapter XL, approved March 7, 1917, Sec. 5, p. 3.

[11] Act of 37-year assembly, Chapter XL, approved March 7, 1917, Sec. 5, p. 2.

[12] Act of 37-year assembly, Chapter XL, approved March 7, 1917, Sec. 5, p. 2.

[13] Banking law, 1921, Sec. 1877.

[14] *Annual Report* of Superintendent of Banking, 1920.

were able to select from a large assortment of banking facilities. If unable to satisfy their desires at one bank, more agreeable treatment usually awaited them at another; and if all the bankers were unreasonable, it was not difficult to start one's own institution which would be run along acceptable lines. All the advantages of free banking came to fruition; there was no monopoly, nor were there many restrictions.

4. *Characteristics of the Iowa banker.* It is not easy to typify Iowa bankers; some characteristics are shared by most of them, while in other respects there are very wide differences. Notwithstanding that only 10% of Iowa banks have failed, however, virtually hundreds of others have been near failure and it is doubtful if few banks in the state have escaped severe losses. Obviously there were some common characteristics, which account for the failure of the bankers to protect themselves from these losses. An explanation of these characteristics is pertinent.

The majority of Iowa bankers are included in the group which is customarily called "small, country bankers." They manage banks of less than $500,000 total resources; their salaries are relatively low; they have been drawn from the ranks of small business and agriculture, or else have come from other small banks; their interests are highly localized. Few of them have ever studied banking or general economics; most of them have learned what they know of these subjects from experience.

In this connection it is important to observe that the experience of few of the bankers in 1920 had included a sharp economic cycle. Most small bankers learn by experience to be good judges of values in their communities as long as values in general remain comparatively stable. It is likewise true that most of them, because of their localized view, have not been impressed with the advantage of holding a secondary reserve consisting of industrial and government securities for which a ready market exists. Furthermore, the experience of very few prior to 1920 had included the urgent need for investments which were capable of ready liquidation.

Regarding their business as that of receiving money on deposit and subsequently lending it, the general price and credit aspects of the banking business have manifested themselves to few Iowa bankers. They did not realize that not only were they the beneficiaries of the price rise during the years preceding 1920, but that they were also contributing parties. The fact that the expansion of bank loans supported and in part caused the inflation of land values in this state may be recognized now, but it certainly was not recognized at the time inflation was in process. Likewise it was not realized that extending credit to farmers for the purpose of holding their crops indefinitely to gain the benefit of rising prices, had the effect not only of holding commodities off the market and in that way augmenting the price rise, but also enabled the owners of these crops to continue their purchases of high-priced products of other industries and in that way contributed to the rise in the latter. What the result would be when these commodities eventually were placed on the market was apparently a question of no concern. Few bankers were aware of the historical fact that following a sharp and protracted rise in prices a subsequent fall is to be expected. Lacking this knowledge, and with prices continually rising, it is little wonder that the average banker lost his sense of balance, for conditions were entirely new both to his experience and to his knowledge.

Even had these facts been recognized, the individual banker would have found it difficult to protect his institution against prevalent conditions. Conservative practices were resented by the inflation-crazed public, and there were so many bankers who were willing to yield to the popular demand that any one who refused to compromise his position fell speedily into disfavor. Facing loss of business and urged by stockholders to earn large dividends, he was a brave banker who dared to assert his forebodings and adhere to safe practice. Furthermore, the influence of the one small institution was so slight that independently no single banker could hope to stem the tide of inflation. Again, it is not difficult to understand why even those bankers who had misgivings finally yielded to the spirit of the times.

5. *Inflation and Depression.* Recognizing that bankers were unequipped both by training and experience to cope with the abnormal conditions of inflation, and that public sentiment was strongly against the occasional banker who was conservatively disposed, it becomes apparent that inflation itself was a major cause of the development of banking conditions which proved to be incapable of withstanding the shock of depression. Why did inflation occur, and why was it followed by the calamitous period of depression?

The story of inflation and depression has been told so often during the past few years that it is hardly necessary to do more than tabulate a few of themore obvious causes and results of inflation. (1) The war disturbed the established channels of trade and required considerable modification of production. This started the upward movement of prices. (2) With the entry of the United States, man-power was drawn into military service from industry although the demand for the products of American industry was undiminished. High prices, large profits, and increased wages, in addition to patriotic appeals, were necessary to stimulate industry. (3) The government adopted a policy of credit inflation in order to finance the war. A greater supply of credit was deemed necessary not only to finance American war industries, but also to accumulate funds to loan Allies. (4) The signing of the Armistice brought a wide-spread feeling of relief from war anxieties and a consequent disposition to be extravagant in seeking pleasure. (5) But the necessitous post-war borrowings by governments in order to finance demobilization made a continuance of easy credit essential. The combination of a disposition to buy freely and of easily obtained credit further stimulated the expansion, with the well-known result.

Iowa was not exempt from these influences. The inflation of land values, speculation in securities, extravagances in purchases and in the assumption of debts, were local forms of the general inflation.

As the inflation was general, so the resulting depression became general. Liquidation became necessary; manufacturing concerns, finding their profits reduced, curtailed operations and laid off workers. The distributive industries adopted hand-to-mouth purchasing policies. In some areas, although not in Iowa, agriculture was involuntarily driven to contraction, most of it occurring in the form of abandonment of farms on account of bankruptcy.

Summary

It becomes clear, as the history of the period from 1914 to 1925 is studied, that bank failures resulted from a complex of conditions. Both the Iowa

public and its bankers, being unfitted by training or experience to comprehend the inevitable consequences of inflation, failed to recognize that the apparent prosperity was to be short lived. The lax provisions of the Iowa law were not calculated to restrain either the public or the banks.

The depression came without warning to most bankers. It found them unprepared and ill adapted for the strain to which they were subjected. Recognition of past errors, changes in the banking law, and more rigorous supervision came too late, and were powerless to save the situation. Tremendous losses, impairment of capital, depletion of reserves, exhaustion of borrowing power, failure of income, and loss of deposits, which usually are enumerated as the causes of failure, were merely the inevitable consequences of the period of inflation.

While some banks had been organized without justification for existence and others were managed in a fashion which would have resulted in failure under any ordinary circumstances, the explanation of the majority of failures should not be sought in these cases. Banks failed during the depression which had long records of successful operation under management no more efficient than was true at the time of failure. The fundamental causes of the mortality were the war, the inflation, lack of regulation, and lack of understanding on the part of bankers of the processes and consequences of inflation.

Significance of Bank Failures

The losses which may be attributed to bank failures are numerous and ramified. First, there are the losses sustained by depositors and other creditors because of the inability of banks to meet their obligations. These may be grouped into two divisions: those which result in a permanent sacrifice of savings, and those which are the consequence of the tying-up or the unavailability of funds. Second, stockholders usually are subjected to assessments and directors are occasionally held liable on guaranties, although in Iowa, the liability of the directors has not been definitely established. Again, the borrowing community, under the pressure of liquidation, is forced into sacrifice sales and suffers the further injury inflicted by a defective credit mechanism which is unable to satisfy legitimate credit requirements.

Great significance likewise inheres in the fact that when a large number of failures occur many other banks have narrowly escaped failure and very few are in an easy position. Thus a graduated scale may be visualized beginning with the few institutions which maintained conditions of strength during the recent crisis, and extending down, through the hundreds of Iowa banks that were more or less seriously affected, to those which were forced to close. The hardship which has resulted from the inability of the seriously affected banks to supply efficient credit service is less spectacular than that which has been occasioned by actual failures, but nevertheless in the aggregate is undoubtedly very great.

Furthermore, it should not be overlooked that owing to the intimate relationship which exists between the conditions of banks and the welfare of their customers, general demoralization of banking facilities affords an excellent measure of the degree of insolvency among the business and farming public. Bank failures, therefore, reflect a banking situation which is both a cause and an effect of general economic conditions.

III. Remedial Proposals

The experience of the past decade, of which bank failures are merely an incident, has exposed a number of serious defects in the banking system. Among them, two of major importance are the failure of the system adequately to protect the savings of depositors and its failure to understand and protect itself against the forces of inflation. These defects are not peculiar to the Iowa system. Demoralized credit facilities and failures have been disturbing factors all over the country, with the consequence that the independent banking system of the United States is under fire. More than in any other recent time, attention is now turning to alternative systems, particularly to branch banking. If the independent system of banking is to survive in Iowa and elsewhere in the country, immediate steps must be taken to eliminate its more serious elements of weakness.

The discussion of remedial measures may feasibly be divided on the basis of the defects which are mentioned above. Under the first heading should be included the measures to be taken both by the state and the bankers themselves for the purpose of enhancing the protection to depositors. Second, consideration will be given the means by which banks may protect both themselves and the public against the destructive forces of inflation.

Protection of depositors. The function of the banking law is to define the powers of banks and bankers; its purpose is to afford protection against acts by these parties which are incompatible with the public welfare. In the effort to conserve freedom in the establishment and conduct of banking institutions, and to protect against monopoly in this field, it would appear that the Iowa banking law has erred in the former direction—it has permitted too large scope in the exercise of individual initiative. The following changes, therefore, are suggested in the interest of greater protection to the public.

1. *Capital requirements.* It is suggested that the minimum capital requirement of all types of banks in Iowa should be raised from the present amount of $10,000 to at least $25,000. The first presumption favoring this change is the fact that the minimum requirement of national banks stands at this figure and that national banks have been less susceptible to failure than the state institutions. There are, of course, other reasons for the greater success of the national institutions. More specifically, however, the bank of very small capital is unable to satisfy the normal credit requirements of an average farming or business community for the reason that under the present excess line limit, which is undoubtedly too high, such a bank is limited to the lending of comparatively small amounts. Adequate accommodation to borrowers, therefore, necessitates the division of business among several banks, which often is troublesome and frequently, as has been described, opens the way for grave credit abuses. Some question may also be raised as to the type of management which is attracted by the small salaries that very small banks may offer.

Since it is to be doubted if there are any Iowa communities beyond easy access to a bank of at least $25,000 capital, the only advantages to be gained by continuing to charter these small institutions, or allowing those now in operation to continue, is the perpetuation and further development of competition among banks and the granting of continued freedom in the banking business. Notwithstanding the large

number of banks which operated in the state, the competition existing among banks in small towns and cities has infrequently been of a character to reduce banking costs or render a cheaper banking service to the community; hence, little gain is to be derived from this source. As for the other possible advantage, it should be clear that reform must lie in the direction of less freedom in banking rather than in more.

2. *Character of borrowing.* The present law relating to the borrowing of banks from their correspondents is very loose and is based upon no sound banking principles.[15] Since the excessive borrowing of many banks during the inflation contributed strongly to the exhaustion of their borrowing power during the later period of stress, the law should be so changed as to prohibit the borrowing by banks of large sums for permanent investment, unless this borrowing is done on the basis of truly long-time credit instruments.

3. *Segregation of assets.* The law never has provided special protection to savings depositors. While the deposits which are technically known as savings deposits do not form a large sum in Iowa, those which are entrusted to banks with the intent of saving are, in the aggregate, a predominant element in total deposits. It is customary with many Iowa banks to accept no savings deposits, but rather to issue time certificates of deposit to persons who desire to accumulate a competence. Most persons who accept these certificates do so for the reason that they are not familiar with other alternatives for the investment of their small savings, which is exactly the reason for the making of savings deposits. The turnover of time deposits is exceedingly slow, giving further evidence of their savings characteristics.

The law should be changed to require the investment of time and savings deposits in securities which are recognized to possess a high degree of both certainty and stability of value, and the segregation of these assets for the special protection of these types of deposits. By this adjustment, protection will be given those depositors who are least able to judge the conditions of their banks and who also are least able to suffer the loss of their funds.

4. *Eligibility requirement of directors.* At the present time, as well as during past years, stockholders have been eligible to the directorate if they owned a minimum of approximately 1% of the capital stock of their bank. While it is probably true that few directors are financially involved to so small an extent, it is exceedingly unwise to sanction the practice at law. Directors should be deeply enough involved to induce their close attention to the conditions of their banks. There is some advantage, furthermore, in having as directors persons who are able to purchase considerable amounts of the capital stock, for, as a rule, persons of this financial caliber are able to support their banks with their personal resources in case losses are sustained.

To suggest an absolute minimum which will impress directors with their responsibility is impossible. The use of dummies, and an irresponsible attitude probably always will characterize some directorates. Yet an increase in the stockholding requirement to a minimum of 5% or 10% would undoubtedly tend to induce more concern on the part of directors and would also have the tendency to weed out directors whose financial responsibility is inconsiderable.

5. *Excess lines of credit.* The pres-

[15] Banking law, Sec. 1855*a*.

ent excess line limit of 20% of the capital and surplus of banks is exceedingly high as measured by the limit for national banks of 10% of capital and surplus. Should one borrower who has received the limit become insolvent and prove a total loss to the bank, the capital funds of the bank would be impaired by one-fifth. It has been necessary to establish the excess line limit at this high level in order to enable the exceedingly small banks which have been organized in Iowa to perform a credit service for any other than very moderate borrowers. Taken in conjunction with an enlargement of the capital requirements of banks, lowering the excess line limit need not curtail the ability of banks to finance their customers, and would have the effect of affording greater protection to bank depositors by securing a wider scattering of risks.

6. *Powers of the banking department.* While bureaucratic control is to be avoided, it perhaps is not unwise to assert that the banking department should be given sufficiently extensive powers to enable it to enforce the law. It is clear that inadequate funds and personnel have hampered the department.

These defects should be corrected. It probably would constitute an undue burden on the banks to increase the fees they are required to pay, and, furthermore, the benefit of adequate supervision is derived principally by the general public, hence it is difficult to understand why the cost of that form of protection should be borne entirely by the banks. But if the policy of collecting fees from the banks is to be retained, it would appear that a most profitable investment of public funds could be made by augmenting these fees with funds from the general treasury to be used for the employment of more examiners and to increase the personnel of the banking department. There should be enough examiners to visit each bank in the state at least twice a year and subject it to a rigorous inspection. The personnel of the department should be sufficient to enable close scrutiny of the reports of all banks and to permit adequate follow-up measures in cases where unsatisfactory conditions prevail.

Mention should be made of several important changes which recently have been introduced among the powers and practices of the state banking department. First, the law has been amended to confer on the Superintendent of Banking discretionary powers in the organization of banks. Wisely administered, this power should curb the organization of banks in places where adequate facilities already exist and where the volume of business does not warrant the establishment of more banks. Second, the banking department has made a new ruling to the effect that directors' examining committees must function and render a report at least once a month. It is expected that by this ruling directors will be forced into closer attention to the affairs of banks than has been manifested in the past.

Not only should the law be strengthened to secure greater protection for depositors, but bankers, of their own initiative, may accomplish much in this direction. If the independent banking system is to survive, it is incumbent on bankers to recognize their responsibilities and take steps to measure up to them in their conduct of business. What should be the character of this reform? First, bankers must give up their time-worn attitude that the conduct of a bank is a purely private affair to the modern conception of a bank as a quasi-public institution. Bankers have use of and should protect the public's

funds; they should be held accountable by the public not merely in cases where loss actually results, but also in practices where the hazard of loss is great. Were bankers to discard their hostility toward a protective banking law and rigorous supervision, were they to adopt a sympathetic attitude toward these institutions, the personal interests of the more prudent among them would undoubtedly be furthered, for good bankers have often been led into disagreeable practices by the necessity of meeting the competition of poorly managed institutions.

The development of a professional spirit and a code of ethics among bankers promises much in the way of eliminating abuses. This is not a new suggestion. For years the State Banking Association has labored to impress the banking community with the necessity of establishing and adhering to a body of banking morals. It has accomplished much, but more still remains to be accomplished; and until bankers recognize the importance of this movement they will be troubled and discredited by the competition of offenders of every sound principle of their profession. Bankers have insured themselves against innumerable outside menaces, but seldom against the frailty of members of their own fraternity.

A few further suggestions which promise immediate and salutary results may be noted. The establishment of local credit information exchanges will enable the bankers of any community to know, rather than to guess, how deeply their prospective borrowers are involved. Were the bankers of the state to stand squarely behind the department of banking in requiring borrowers to present true and accurate statements of conditions, the present difficulty of obtaining them would vanish, for borrowers refuse only because there are plenty of bankers who will not insist on them. And were these statements used by bankers as a basis for determining financial responsibility, many losses from poor loans would be avoided. Impressing directors with the fact that banks have a public purpose and should not be used primarily as a means of supplying themselves with funds will lift many banks out of the quagmire into which they have fallen. Furthermore, were directors to realize their responsibilities and take an active part in the management of their institutions, the incompetence of many "active" officers would bear less harmful fruit, and failures due to "one-man" banks would be far fewer. In these and in many other ways the banking fraternity may protect the public interest by raising their own standards of practice.

Protection against inflation. Regardless of these precautions, however, the banking system will again be the victim of demoralized credit conditions and failures unless inflation and the consequent depression are prevented. With prices advancing, the net worth of borrowers measured in money actually increases, and there appears to be the basis for enlarged accommodation. Yet, as has been seen, this condition often is only temporary, and during the later period of declining prices, net worth is likely to vanish much more rapidly than it appreciated in the first instance. Under these circumstances bank paper suffers in quality from the standpoint of collectibility as well as salability.

Space does not permit a comprehensive treatment of means of combating inflationary tendencies. If the lessons of experience sink deeply enough, there may be hope that the general public will curb its own disposition to encourage inflation. Among Iowa farm-

ers and bankers there is now a keen appreciation of the dangers of inflating land values beyond reasonable income-yielding possibilities. And if banks make a concerted effort to restrain the disposition of the public to enlarge the use of bank credit, when its effect is principally that of causing prices to increase still further, a powerful anti-inflation influence may be exerted. The latter is the principle upon which the variable rediscount rates and the open market operations of the Federal Reserve System are based.

The individual banker is not in a position to know when or to what extent such measures should be resorted to. His only prospect of gaining this information is to cooperate with others who are similarly concerned in establishing and subscribing to research organizations which are capable of analyzing price and credit trends and recommending sound policies of credit control. The Federal Reserve System has the equipment for this type of analysis, and has endeavored to induce the banks of the country to conform in their policies to its leadership. Either by joining the Federal Reserve System, or perhaps by establishing a similar agency within the American Bankers Association, the individual banker may place himself in position to gain protection against inflationary tendencies.

But it is not enough to recognize price and credit trends and to determine upon a feasible policy of credit control. Success may be had only by putting the policy into effect. Were the banks to take out membership in the Federal Reserve and adopt a sympathetic and cooperative attitude, or were they to coordinate their policies with that of any other agency established with a similar purpose and like competence, a large measure of success would result.

There are, however, grave practical obstacles to efforts of this character. First, it is almost impossible to impress the average banker with the rôle that he plays in the price-making process and to gain his cooperation in a policy of credit control. Probably as much as may be hoped is that the larger bankers of the country will cooperate and in turn be able to exert some influence over the smaller bankers. Second, politics and the influence of powerful groups are omnipresent sources of trouble, and are almost certain to shape in some degree the policies of credit control which finally are determined upon. Third, the exigencies of war usually result, whether necessarily or not, in the abandonment of sound credit policy and the deliberate adoption of a policy of inflation. People willingly offer their lives in time of national emergency, but have to be intrigued into yielding their material means. The development of a wise and well-coordinated credit policy, and its successful application, are by no means simple tasks.

It remains to be seen if these reforms can be effectuated. Bank failures in Iowa, and the demoralized credit machinery of which they are a barometer, have not been caused by conditions of merely local significance, but in a large measure are due to inherent defects of the independent banking system. Most of the other principal nations have turned to branch banking as a solution of the problem. Many eyes in this country are gazing in the same direction. Some features of the independent system, however, are worth conserving. It may be that, recognizing the elements of weakness, bankers and the public will set themselves resolutely to the task of correcting enough defects to justify its retention. But the system must stand or fall on its merits.

THE COLLECTIVE LEASING AND FARMING OF LAND IN ITALY[1]

By ASHER HOBSON

IN a previous article[2] I traced the development of the organized efforts of the landless agricultural laborer in Italy in his attempt to improve his economic conditions. The history of the organized activities of the farm wage-worker clearly shows that although his associations were able in many sections to monopolize completely the labor market, the unions were not in position to restrain the employers of agricultural labor from reducing their demands for wage-workers. In fact, the demands for labor decreased in proportion to the successes achieved by the unions in securing shorter hours and higher wages. In other words, higher wages and shorter hours resulted in more unemployment. The landowners had recourse to two effective methods in reducing their labor needs. They substituted crops requiring little labor for crops requiring much labor. They replaced the cash wage-earner by one receiving payment in kind on a share basis. The usual manner of bringing about this end was to adopt a system of share tenancy whereby the tenant and his family furnished the requisite amount of labor.

This reaction on the part of employers left the labor organizations with a surplus of labor on their hands. This surplus became such a burden as to threaten the power of the unions in their control of the agricultural labor market.

Chief Aim of Collective Leasing Policy of Unions

The resistance of employees made it difficult to enforce a system of working in relays in order that all the members could share in the high wages which the union had secured for them. Hence, as a means of furnishing employment for all their members, the labor organizations transferred a portion of their energies from the higher wages and shorter hours issue to the collective leasing and farming of lands. The unions entered this field primarily for the purpose of strengthening their position in the labor market, by controlling land upon which they could furnish work for their unemployed members.

Collective leasing was a partial remedy, by supplying work for those laborers who were not able to find places on privately owned lands. Workers, who, because of age, sex, or other reasons, could not lay claim to the higher wages stipulated in the union agreements were able to secure occu-

[1] In the preparation of this article the author has drawn freely from Dr. Dario Guzzini's publication entitled *Le Imprese Agricole Cooperative,* Professor Serpieri's *Studi sui Contratti Agrari,* and an unsigned article appearing in the October, 1921, issue of the *International Review of Agricultural Economics,* entitled "Co-operative Landholding Societies in Italy."

[2] EDITORIAL NOTE: To obtain a well-rounded picture of the economic position and activities of agricultural labor in Italy, a reading of this earlier article is recommended. See JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS, October, 1925, pp. 425-434.

pation on the collectively leased lands. For example, it became a common practice in some districts for the head of the family to work on privately owned land, and the members of his family to work on the land leased by the cooperative associations. By this method the competition for jobs does not endanger to so great an extent the high wage-rate established by the labor organizations. Even though those working on the cooperatively leased lands often receive less than the established wage, the system does have the merit of furnishing employment for the less fit; and by giving occupation to the members of the laborer's family, it tends to make the total family income more certain.

Types of Collective Landholdings

Many of these cooperative associations were organized for the purpose of leasing land in order that each member could have a small plot which could be tilled by himself when not employed elsewhere, or could be tilled by members of his family. In these instances, the collective lease served as a means of securing family allotments which were never looked upon as a main source of income but rather as a supplementary source. Where the allotments are maintained for the purpose of employing spare time, or the time of unemployed members of the family, it is not expected that they will yield a labor return at the established rate.

As a rule, the collective landholding movement has a strong socialistic trend. Some leaders look upon it as a step toward land nationalization. Although the movement is fathered by labor organizations and by political parties, the collective leasing and cooperative farming associations are distinct and separate bodies created for the specific purpose of holding and operating land. The forms of activity differ according to the purpose in view. In the main they may be divided into three groups:

1. *Cooperative landholding associations which farm the land they control.* This type of society not only collectively owns or leases the land under its control, but it also farms the land through cooperative effort. A manager is employed and a permanent staff is secured on a yearly wage to look after the live stock and equipment. Casual day labor is hired for the seasonal work. Usually the staff, whether permanent or casual, is selected from among the members of the association. As a member, the worker has a right to share in the profits of the undertaking. As a worker, he receives a stipulated wage either in money or in kind. The general practice for associations of this type is to adjust its area to the land requirements of its members. It often happens, however, that some of the members must find employment on other land, and it is also necessary at times for the association to employ non-members.

As a rule, the association pays the local rates of wages. However, in order to secure working funds, it is quite usual for the organizations to withhold from 10% to 25% of the wages of members. These deductions are treated as a loan. Some societies accomplish this end by paying reduced wages, while others require each member to contribute each year so many days' work without charge.

2. *Cooperative landholding societies which provide a separate allotment for each member.* This type of association represents collective action for securing a separate farm for each member. The

land controlled by the society is divided into as many small holdings as there are members to be accommodated. Each holding is provided with a dwelling house and the necessary outbuildings.

Each member is responsible to his society, and the society is responsible to the landowner. In general, the society secures the land at a fixed rent, and the members work it for the society on a 50-50 crop-sharing basis.

Usually, the society provides for the collective purchase of the agricultural requisites and the sale of the produce; and, more important, it carries on such industries as cheese-making, wine-making, and provides for the joint use of farm machinery. These are activities which the individual is unable to conduct by himself. In some cases, the organization employs a technical manager to supervise and assist the members in the handling of their allotments.

3. *Cooperative landholding societies which provide their members with land for the purpose of growing a large part of their own food requirements.* In certain sections of Italy (Apulia, Calabria, Latium, and Sicily) the land is held in large estates — *latifundia.* This land is cultivated in an extensive manner and given over largely to grass and cereals. In February, 1918, and September, 1919, the government passed decrees which permitted the requisitioning of lands which were uncultivated or badly cultivated. Under these decrees many farms were requisitioned and assigned to cooperative landholding societies.

The aim of the members of these societies is to secure a sufficient amount of land on which to grow a year's supply of food, particularly wheat, for family consumption. The member furnishes the necessary labor for this enterprise during spare hours or during periods of unemployment. He pays the rent to his association on a crop-sharing basis.

Favorable Credit to Cooperative Societies

The landholding associations have been especially favored in matters of credit. A decree of April 22, 1920, created a special section dealing with land and agricultural credit under the auspices of the National Credit Bank for Cooperation. This section undertakes to furnish credit to agricultural laborers' associations legally recognized, either in the form of cooperative societies or otherwise, which are owners or tenants of land or have in any way obtained possession of land. The section is authorized to carry on the following business: "(1) To make loans of working capital for the management of land, the ordinary cultivation of land, or for the handling of produce; (2) to make loans for land improvement and for transformation from one kind of cultivation to another; (3) to make mortgage loans for the purchase of land, for the redemption of dues, and for land improvement up to 80% of the purchase price or of the estimated value of the land."

This section of the bank has at its disposal a foundation capital of about $2,500,000[3] (50,000,000 lire), of which $1,250,000 (25,000,000 lire) was assigned to it by the State as a special contribution without interest, $750,000 (15,000,000 lire) contributed by the National Organization for Ex-Soldiers, and $500,000 (10,000,000 lire) from the National Social Insur-

[3] The lira was worth a little less than 5 cents in 1920-1923.

ance Fund. The State has also advanced another $2,500,000 (50,000,000 lire) in the form of a loan for working capital and contributes to the extent of 2½% to the payment of interest on mortgage loans.

During the first three years of its activities, this section granted $1,063,925 (21,278,500 lire)[4] in mortgage loans for land purchases.

In addition to credit problems, the landholding associations also faced the technical questions of management. Most associations require the services of an administrator-manager well versed in farming practices, and also the services of a secretary-bookkeeper. Many of the societies are not in position to employ these technical services. In order to meet this difficulty, provincial federations were formed.

Extent of Federations of Cooperative Societies

The influence of the federations have become wide-spread. In the province of Emilia these cooperative associations have formed a provincial federation to which 7 associations are affiliated, the most important of which owns land valued at $500,000 (10,000,000 lire), and has over 700 members. The Provincial Federation of Parma is a group of 9 associations farming an area of 6,480 acres (2,700 hectares).[5]

The Milanese Provincial Federation gathers together 13 cooperative associations which have obtained loans for $800,000 (16,000,000 lire) from the National Credit Bank for Cooperation. With these funds the federation is reorganizing its farms, which cover an area of 10,994 acres (4,581 hectares), with 6,000 head of cattle, 225 agricultural machines, and an output of some 22,000,000 pounds (100,000 quintals)[6] of rice, besides other less important crops. On this land about 600 families are lodged and find work.

A notable organization is that of the Lombardy Consortium for Collective Leasing of Lands which, besides providing technical direction and management for its federated associations, attends to the collective purchase of live stock, machinery, fertilizers, and other requisites for its members, whose products it places on the market. Ten cooperative associations leasing 24 farms covering an area of 6,283 acres (2,618 hectares), with 5,000 head of cattle, and a daily output of 4,000 gallons of milk, are affiliated with this consortium.

In the province of Bergamo the cooperative leasing associations have formed a federation of which 70 associations are members, cultivating an area of 16,800 acres (7,000 hectares), partly owned and partly leased. In 1920 in the province of Ravenna, 56 cooperative associations farmed 35,296 acres (14,707 hectares) of land.

There are over 100 collective leasing associations in Sicily. In 1923 the agricultural credit section of the Bank of Sicily was managing, through agencies, 41 cooperative leaseholds, farming 132 estates covering an area of 88,860 acres (37,025 hectares).

Functions of Federations

The object of these federations and sections of federations is to supply technical assistance to the affiliated societies by means of a qualified staff. In some cases, the accounts of every affiliated society are kept at the office

[4] Lira worth about 5 cents.

[5] A hectare is roughly equal to 2.4 acres.

[6] A quintal is equivalent to about 220 pounds.

TABLE I. COOPERATIVE LANDHOLDING SOCIETIES IN THE PROVINCE OF PARMA, 1921*

Societies	Number Members	Area in Acres	Yearly Rent	Value of Live Stock	Machines and Implements	Capital			
						Paid Up Capital	Reserve Fund	Miscellaneous Funds	Net Capital
Borgo S. Donnino	216	132.480	$ 420.22	$ 2,611.99	$ 3,255.21	$ 111.73	$2,779.78	$ 77.87	$ 2,969.46
Busseto	75	367.264	1,812.35	10,384.08	6,197.18	289.50	37.49	31.03	358.07
Colorno	426	553.472	2,125.39	10,367.58	5,305.14	454.75	677.23	98.02	1,229.95
Fontanelle	540	866.272	2,486.42	18,785.47	10,266.76	5,240.40	683.13	360.83	6,284.41
Ravadese	30	195.040	755.24	2,920.88	1,748.61	346.96	135.64	75.43	558.06
Sissa	125	253.920	1,028.15	4,127.26	2,323.05	1,711.07	112.75	435.05	2,241.24
Soragna	158	483.552	1,419.89	16,707.05	7,660.12	1,063.97	149.37	78.66	1,292.18
Total	1,570	2,852.000	$10,047.66	$65,904.31	$36,756.07	$9,218.38	$4,575.39	$1,156.89	$14,933.37

* *International Review of Agricultural Economics*, October, 1921. Data in this table have been computed in English measurements from the metric system. The lira in 1921 was worth about 5 cents.

of the federation. The federations assist in negotiating for new land and in some cases to take land directly and sublet it to affiliated cooperative societies without increase of rent or with a very small increase sufficient to cover expenses. The federations also assist the cooperative societies in negotiations for obtaining the necessary advances from credit institutions, in the purchase of agricultural requisites, and in other business transactions.

The data in Table I concerning the seven landholding societies of the province of Parma convey an idea of the size and financial status of the individual associations.

Cooperative landholding associations have been passing through a severe crisis, due largely to the revision of rents, authorized by a special decree. This revision has adversely affected these associations, many of which had succeeded in securing the land at a very low rate. The changed political conditions have also reacted on them disadvantageously. Meantime, a selective process has eliminated the less efficiently managed, to the ultimate advantage of the others. It is estimated that there are in Italy from 250 to 300 associations for collective leasing, their holdings covering areas of from 190,000 to 240,000 acres.

Significance of Collective Leasing

As has been indicated, the primary purpose of cooperative landholding societies was to help absorb a portion of the unemployed of the agricultural labor class in order that the unions would be in a better position to influence the agricultural labor market to their advantage. The movement has taken on a much wider significance within the last four or five years. The cooperative landholding societies have brought up the whole question of the reform of the farm lease.

When the laborers had as their sole objective shorter hours and higher wages, the tenant farmers who were often employers of labor had little sympathy with the movement, although the lease system was such as to reduce a large proportion of the tenants to a status little better than that of a laborer. But when the landowners sought to evade the mandates of the unions through the tenancy system, this brought the labor organizations into direct conflict with the share-tenant and with the farm lease. This interest won the sympathy of the farm tenants, to the extent that they also have formed organizations directed mainly against the landowner.

The attitude of the agricultural labor

organizations on the question of the farm lease is shown by the following characteristic appeal addressed to tenants by the Cooperative Peasants' Bank in one of the districts of the province of Reggio-Emilia:

> The Cooperative Peasants' Bank views with much anxiety the fact that keen competition will exist among the peasants when the present leases expire, and has called its members to an assembly which was held on May 29. This assembly, which was widely attended, decided that the sole means for securing equitable reductions in the rents charged by the landowner calls us to enforce rigid discipline. This discipline consists in loyalty to the organizations, such as is observed by every other class, and consequently it was decided that none of the members may draw up leases separately, but that the Association is entrusted to negotiate on behalf of all its members. On the basis of those rules of equitable appraisement and distribution it may be agreed to by members themselves. The Association will take into consideration the terms of the lease so that they may better respond to the age in which we live and to the exigencies of the working renters, and so that they may favor the increase of production.
>
> The Association will also safeguard the interests of the crop-sharing tenants, and of the small landowners, both by revising the crop-sharing lease and by assisting them in other ways. The assembly also assumed special importance because it realized the need of insuring employment to casual laborers, who have a right to live, as well as the desirability of securing a better yield from the land in the interests of all concerned.

Nearly all agricultural labor organizations are now concerning themselves with the question of the farm lease. In some cases, the organizations handle for their members all negotiations pertaining to the lease.

It is not possible in this discussion to go into the details of the farm lease reforms, but it is important to note that the tenant and the laborer, through their organizations, are in position to make the lease a matter of collective action. In many districts the farm lease has now become a question for joint action of associations representing the tenant with associations representing the landowners.

The whole history of the struggle in Italy between the landlord, on one side, and the agricultural laborer and tenant, on the other, is a narrative of action and reaction—offense and defense. It is the capital versus labor struggle injected into agriculture. Its causes are many. Perhaps the outstanding factor is that Italy has a large landless agricultural class, the members of which have little prospect of becoming landowners. At best, it is an unhealthy social condition. It gives rise to national problems of serious proportions.

This brief history contains helpful suggestions to the United States by pointing out circumstances to be avoided. American agriculture is fortunate in not having a class struggle among those engaged in farming. Care needs to be exercised in eliminating conditions which tend to encourage such a struggle. A prudent national agricultural policy must prevent the formation of a permanent class of landless agricultural workers.

COST OF MONEY TO PUBLIC UTILITIES 1914-1922

By FRANK PARKER

WITH strict regulation of rates of service, rates of return, and various other factors in the investment bargain, utilities have had to finance their operations on close margins. Generally speaking, smaller margins require greater attention to the costs of financing. Particularly during the unsettled conditions of the past decade the cost of money to utility financiers has been of great importance. This study, it is hoped, will contribute to the understanding of the fluctuations in the cost of money to utilities, when needed funds are raised by bond, note, or stock issues.

Cost of Money Defined

The cost of financing to public utility companies is composed of two distinct elements, (1) the mechanical cost of financing, including therein all costs of preparing, printing, engraving, registering, and distributing security issues, whether stock, bonds, or notes, as well as the cost of recording mortgages and other necessary papers, trustees' fees and expenses, and so forth; and (2) the cost of obtaining money realized from the sale of such securities, whether such cost be incurred in the form of direct expenses paid by the company—where securities are sold direct by the company to the investor—or as sums paid to bankers for their services in effecting the sale of the company's securities.

The first group of expenses is capable of exact determination by examining the records of the particular utility. Inasmuch as it constitutes a relatively small part of the total cost of financing, seldom exceeding 1% of the total property investment, and since the ascertainment of the exact amounts expended on the mechanical cost of financing presents unusual difficulties, no extended consideration will be given here to this phase of the cost of financing. Provision is made in substantially all of the classifications of accounts promulgated by the various public service commissions throughout the United States for including in the capital accounts the exact costs as recorded on the books of the public utility company, incurred in the printing, engraving, registering, and distributing of securities.

The cost of obtaining money, or brokerage, as it is sometimes termed, must not be confused with discount, which represents the difference between the par value of securities and the price paid therefor by individual investors. This difference is an adjustment of the interest rate which, when averaged over the life of the bond—in conjunction with the interest periodically paid by the company—gives the investor an average yield approximating the current yield for securities of the character in question. As distinguished from discount, the cost of obtaining money represents the difference between the price at which securities are sold to the banker by the utility and the price at which the banker in turn sells them to the investing public. It includes a reasonable compensation for the banker's services in marketing

TABLE I. COST OF OBTAINING MONEY TO PUBLIC UTILITIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK, JANUARY, 1914—DECEMBER, 1922, INCLUSIVE

YEAR	Par Value A (*Dollars*)	Price Received by Company from Bankers B (*Dollars*)	Bankers' Sales Price C (*Dollars*)	Bankers' Commission D (*Dollars*)	Percentage Cost of Money $\frac{D}{B}$
BONDS					
1914	67,570,000	62,176,518	65,676,101	3,499,583	5.628
1915	80,765,000	73,946,029	78,306,090	4,360,061	5.896
1916	77,565,900	70,243,895	74,591,317	4,347,422	6.189
1917	63,530,000	58,995,509	61,899,215	2,903,706	4.922
1918	39,150,000	34,824,647	36,933,512	2,108,865	6.056
Total 1914-1918	328,580,900	300,186,598	317,406,235	17,219,637	5.736
1919	130,496,000	122,082,433	127,909,428	5,826,995	4.773
1920	152,566,000	136,429,016	145,125,260	8,696,244	6.374
1921	300,822,100	272,866,857	289,173,467	16,306,610	5.976
1922	220,715,800	200,448,927	213,361,339	12,912,412	6.442
Total 1919-1922	804,599,900	731,827,233	775,569,494	43,742,261	5.977
Total 1914-1922	1,133,180,800	1,032,013,831	1,092,975,729	60,961,898	5.907
NOTES					
1914	19,400,000	18,604,950	19,234,650	629,700	3.385
1915	15,090,500	14,442,616	14,928,491	485,875	3.364
1916	17,731,000	17,342,244	17,677,857	335,613	1.935
1917	33,902,600	32,131,596	33,566,857	1,435,261	4.467
1918	75,104,800	70,677,968	73,464,314	2,786,346	3.942
Total 1914-1918	161,228,900	153,199,374	158,872,169	5,672,795	3.703
1919	134,550,000	128,691,500	132,887,265	4,195,765	3.260
1920	85,575,500	80,786,568	83,673,450	2,886,882	3.573
1921	41,450,000	40,329,820	41,394,660	1,064,840	2.640
1922	3,250,000	3,068,500	3,183,250	114,750	3.740
Total 1919-1922	264,825,500	252,876,388	261,138,625	8,262,237	3.267
Total 1914-1922	426,054,400	406,075,762	420,010,794	13,935,032	3.432

the securities and forwarding the funds yielded to the utility; the services and expenses of examination, negotiation, advertising, and selling through all of the various stages until the sale to the final investor is effected.

Factors Affecting the Cost of Money

Considerable study has already been given to the relative advantages of bond, note, and stock financing in different periods of the business cycle. It is also well known that the costs of borrowing from creditors in return for bonds or notes and of raising funds by stock issues vary markedly from time to time. This is the background of the present study and it may be appropriate to mention briefly the outstanding factors that affect the cost of obtaining money; namely, (1) the existing conditions in the money market, (2) the type of security issued, (3) the general reputation of the type of enterprise seeking the capital, (4) the location of the enterprise, (5) the extent to which the territory served has been developed, (6) the present earning power of the property, (7) the degree to which speculative risks are involved, and (8) the character and extent of local and state regulation and control to which the utility is subjected.

No extended explanation need be given of most of the foregoing factors. Professor W. C. Mitchell has made a careful analysis[1] of fluctuations in the

[1] Mitchell, W. C., *Business Cycles.*

TABLE I (*Continued*). COST OF OBTAINING MONEY TO PUBLIC UTILITIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK

YEAR	Par Value A (*Dollars*)	Price Received by Company from Bankers B (*Dollars*)	Bankers' Sales Price C (*Dollars*)	Bankers' Commission D (*Dollars*)	Percentage Cost of Money $\frac{D}{B}$
STOCK					
1914	3,104,500	2,744,500	2,927,635	183,135	6.673
1915 There were no issues of stock made during 1915 for which complete information was available.					
1916	250,000	250,000	257,500	7,500	3.000
1917	2,000,000	1,830,000	1,995,000	165,000	9.016
1918	345,000	345,000	362,250	17,250	5.000
Total 1914-1918	5,699,500	5,169,500	5,542,385	372,885	7.213
1919	7,535,000	6,480,400	6,854,650	374,250	5.775
1920	2,395,000	1,345,500	1,555,000	209,500	15.570
1921	12,820,000	12,145,000	12,869,000	724,000	5.961
1922	20,168,600	17,675,995	19,629,806	1,953,811	11.053
Total 1919-1922	42,918,600	37,646,895	40,908,456	3,261,561	8.664
Total 1914-1922	48,618,100	42,816,395	46,450,841	3,634,446	8.488
Grand Total	1,607,853,300	1,480,905,988	1,559,437,364	78,531,376	5.303

money and investment markets and in the salability of bonds and stocks during the various phases of the business cycle. For the present purpose one needs to consider only two of the foregoing factors; namely, the general reputation of the type of enterprise seeking capital, and the effect of local and state regulation on the utility's financial standing.

The general reputation of the type of enterprise seeking capital plays a significant rôle in determining the cost of obtaining money. By type of enterprise is meant public utilities as distinguished from industrial enterprises; steam railways likewise are excluded from the present analysis although recognized as public utilities. From 1900 to 1920 the investment standing of many public utility securities progressively declined in the estimation of investors, and this decline in popularity accounted for the increasing cost of money to individual public utility enterprises. The lack of a carefully conceived policy of public relations, the inability of utility managers to foresee an unprecedented growth in the industry, and hence their failure to make adequate provision for extensions and improvements to meet the demand for their services, the difficulties of adjusting their rates and service to meet the stringent regulations of the public service commissions, and the limitations to which a fixed rate of return subjected all public utilities during the period of the pronounced rise in prices from 1914 to 1920, made serious encroachments on profits and resulted in turning the interest of investors toward other fields. Moreover, the greater effort and larger expenditures necessary to sell public utility securities caused an increase in the cost of obtaining money in the post-war period as contrasted with pre-war days. This increased difficulty in selling public utility securities was due partly to the decrease in accumulated savings following the destruction and waste of capital during the World War, and also to the fact that the surtaxes under our income tax laws convinced the large investor of the economy of buying securities that were tax free. As a consequence, the average sales per capita of all classes of secu-

Table II. Cost of Obtaining Money to Electric Light and Power Companies in the United States Through Sale of Bonds, Notes, and Stock, January, 1914—December, 1922, Inclusive

Year	Par Value A (*Dollars*)	Price Received by Company from Bankers B (*Dollars*)	Bankers' Sales Price C (*Dollars*)	Bankers' Commission D (*Dollars*)	Percentage Cost of Money $\frac{D}{B}$
Bonds					
1914	18,119,000	15,956,060	17,126,561	1,170,501	7.336
1915	32,341,000	29,386,250	31,080,770	1,694,520	5.766
1916	46,771,500	41,974,972	44,849,073	2,874,101	6.847
1917	53,255,000	49,651,210	52,048,415	2,397,205	4.828
1918	31,916,000	28,081,747	29,832,282	1,750,535	6.234
Total 1914-1918	182,402,500	165,050,239	174,937,101	9,886,862	5.990
1919	83,799,000	76,957,110	81,163,510	4,206,400	5.466
1920	127,566,000	113,804,016	121,375,260	7,571,244	6.653
1921	188,672,100	171,405,327	182,026,006	10,620,679	6.196
1922	117,555,800	106,453,442	114,241,699	7,788,257	7.316
Total 1919-1922	517,592,900	468,619,895	498,806,475	30,186,580	6.442
Total 1914-1922	699,995,400	633,670,134	673,743,576	40,073,442	6.324
Notes					
1914	7,000,000	6,791,450	6,975,000	183,550	2.703
1915	13,026,500	12,481,842	12,894,876	413,034	3.309
1916	400,000	355,770	400,000	44,230	12.432
1917	21,613,600	20,348,648	21,358,524	1,009,876	4.963
1918	27,929,800	25,786,710	27,093,876	1,307,166	5.069
Total 1914-1918	69,969,900	65,764,420	68,722,276	2,957,856	4.498
1919	13,650,000	12,968,000	13,444,875	476,875	3.677
1920	38,100,500	35,376,813	37,160,735	1,783,922	5.043
1921	2,850,000	2,631,000	2,782,500	151,500	5.758
1922	750,000	693,500	733,250	39,750	5.732
Total 1919-1922	55,350,500	51,669,313	54,121,360	2,452,047	4.746
Total 1914-1922	125,320,400	117,433,733	122,843,636	5,409,903	4.607

rities, except municipals and government securities, declined substantially from 1918 to 1921. Figures based upon the records of a large bondhouse with a nation-wide organization and clientele show that as of 1921 the average sale per capita had dropped from $23,000 to $8,000; in order to sell 24 bonds in denominations of $1,000, it was necessary to sell to three people instead of one. This decrease in the amount of sales per capita meant that to sell a given amount of securities the banker was obliged to see a great many more prospects, to spend more time, and to incur greater expenses in advertising and circularizing, and this increased cost of doing business to the banker partially explains the increased cost of money to public utility enterprises.

Speculative risk as an item affecting the cost of obtaining money to public utilities is closely associated with local or state regulation and control. Ordinarily, a public utility enterprise established in a community giving reasonable promise of continuous growth and administered by officials possessing technical knowledge and operating experience, is much more fortunately situated with reference to making profit than an industrial or mercantile enterprise doing business in the same locality. Comparative freedom from competition, and the assurance of such freedom continuing as long as commission regulation lasts, coupled with the rendition of services that are today deemed indispensable to the community, gives a degree of safety to the bonds, notes, and stocks

TABLE II *(Continued)*. COST OF OBTAINING MONEY TO ELECTRIC LIGHT AND POWER COMPANIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK

YEAR	Par Value A (Dollars)	Price Received by Company from Bankers B (Dollars)	Bankers' Sales Price C (Dollars)	Bankers' Commission D (Dollars)	Percentage Cost of Money D/B
STOCK					
1914	850,000	850,000	875,500	25,500	3.000
1915–1916 There were no issues of stock made during these years for which complete information was available.					
1917	1,500,000	1,395,000	1,515,000	120,000	8.602
1918	345,000	345,000	362,250	17,250	5.000
Total 1914-1918	2,695,000	2,590,000	2,752,750	162,750	6.284
1919	6,500,000	5,637,500	5,950,000	312,500	5.543
1920	2,100,000	1,080,000	1,260,000	180,000	16.667
1921	12,200,000	11,567,000	12,249,000	682,000	5.896
1922	18,968,600	16,715,995	18,585,806	1,869,811	11.186
Total 1919-1922	39,768,600	35,000,495	38,044,806	3,044,311	8.698
Total 1914-1922	42,463,600	37,590,495	40,797,556	3,207,061	8.532

of utilities that the securities of the usual private enterprise lack. Exception should probably be made of utilities operating under short-term franchises.

Yet legislative and administrative control of utilities through state statutes and state public service commissions also entails risks to the investor that are reflected in the cost of obtaining capital. Uncertainties as to safety of principal and income incident to commission appraisal of the fair value of the property and changes in policy in fixing the rate of return inevitably add to the cost of obtaining money. Reduction of overhead allowances to a bare minimum, flat refusal to recognize promotion fees and expenses as legitimate expenditures in the construction and development of a property, failure to grant reasonable allowance for development cost, going concern value, and working capital—not to mention, perhaps, unduly severe paring of the value assigned to the physical property—all tend to reduce the rate base upon which the investor's original contribution to the utility was grounded and thus make it impossible to attract additional capital except at an appreciably higher cost.

Relation between Rate of Return and Cost of Money

Most of the influences exerted by regulatory bodies on the cost of money can be focused in the rate of return. Clearly a direct correlation exists between a reasonable return—not merely a non-confiscatory return which is largely a legal matter—and the attraction of capital into the utility field. If the rate of return is not high enough to compensate efficient management and labor as well as to compensate the contributors of capital funds, while keeping the property unimpaired, obviously, then, the service, earnings, and credit position of the utility will suffer, while the cost of obtaining funds for maintenance and expansion of service will proportionately rise. Of course, the rate of return does not fix the cost of obtaining money; it merely determines the conditions under which money can be acquired. But in so far as the rate of return functions as a provider of earnings, money will cost more or less as the conditions created by the rate of return destroy or encourage the investors' confidence.

TABLE III. COST OF OBTAINING MONEY TO ELECTRIC RAILWAYS IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK, JANUARY, 1914—DECEMBER, 1922, INCLUSIVE

Year	Par Value A (Dollars)	Price Received by Company from Bankers B (Dollars)	Bankers' Sales Price C (Dollars)	Bankers' Commission D (Dollars)	Percentage Cost of Money $\frac{D}{B}$
Bonds					
1914	34,876,000	32,435,208	34,019,540	1,584,332	4.885
1915	47,009,000	43,308,059	45,856,770	2,548,711	5.885
1916	19,720,400	18,106,343	18,806,171	699,828	3.865
1917	5,770,000	5,263,049	5,553,550	290,501	5.520
1918	4,731,000	4,447,502	4,650,485	202,983	4.564
Total 1914-1918	112,106,400	103,560,161	108,886,516	5,326,355	5.143
1919	3,217,000	2,904,523	3,071,418	166,895	5.746
1920 There were no issues of bonds made during 1920 for which complete information was available.					
1921	20,200,000	17,634,980	19,115,540	1,480,560	8.396
1922	33,223,000	29,726,090	31,365,500	1,639,410	5.515
Total 1919-1922	56,640,000	50,265,593	53,552,458	3,286,865	6.539
Total 1914-1922	168,746,400	153,825,754	162,438,974	8,613,220	5.599
Notes					
1914	8,900,000	8,380,000	8,772,150	392,150	4.680
1915	1,914,000	1,821,274	1,885,115	63,841	3.505
1916	7,831,000	7,688,974	7,815,357	126,383	1.644
1917	11,889,000	11,404,948	11,815,693	410,745	3.601
1918	42,400,000	40,357,000	41,696,500	1,339,500	3.319
Total 1914-1918	72,934,000	69,652,196	71,984,815	2,332,619	3.349
1919	7,500,000	7,033,000	7,289,890	256,890	3.653
1920	7,125,000	6,660,000	6,981,250	321,250	4.824
1921	3,400,000	3,113,750	3,295,910	182,160	5.850
1922	2,500,000	2,375,000	2,450,000	75,000	3.158
Total 1919-1922	20,525,000	19,181,750	20,017,050	835,300	4.355
Total 1914-1922	93,459,000	88,833,946	92,001,865	3,167,919	3.566

Scope of Study

The collection of data on the cost of money is limited to public sources because the prices received by a utility from bankers for marketed securities are confidential matters. The task requires specific information on the following points: the type of security as well as the amount authorized to be sold to the public; the price received by the public utility company from the banker (or the public, where the security is preferred stock being sold directly to the public); and the price at which the securities are ultimately offered to the public. With the exception of the data relating to the price received by the company from the bankers, little difficulty was experienced in ascertaining all of the foregoing information, where the public service commission laws make this information a matter of public record. Where the data relating to the type of security, amount authorized, and the offering price to the public were not set forth in detail in the reports of the commissions, two other reliable sources of information were resorted to, namely, *Public Utilities Reports Annotated* and the *Commercial and Financial Chronicle*. The exact price received by the utility from the bankers can only be obtained from one of three sources: the records of the public utility itself, the bankers engaged in marketing the securities, and the records of such public service commissions as have been given plenary jurisdiction over the issuance of public utility securities. To have ac-

TABLE III *(Continued)*. COST OF OBTAINING MONEY TO ELECTRIC RAILWAYS IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK

Year	Par Value A (Dollars)	Price Received by Company from Bankers B (Dollars)	Bankers' Sales Price C (Dollars)	Bankers' Commission D (Dollars)	Percentage Cost of Money D/B
STOCK					
1914, 1915 There were no issues of stock made during these years for which complete information was available.					
1916	250,000	250,000	257,500	7,500	3.000
1917, 1918 There were no issues of stock made during these years for which complete information was available.					
Total 1914-1918	250,000	250,000	257,500	7,500	3.000
1919	500,000	340,000	375,000	35,000	10.294
1920, 1921, 1922 There were no issues of stock made during these years for which complete information was available.					
Total 1919-1922	500,000	340,000	375,000	35,000	10.294
Total 1914-1922	750,000	590,000	632,500	42,500	7.203

cepted only the scattered data concerning the exact price received by the utility from the banker, furnished either by the utility or by the banker, would have so limited the field of this investigation as to impeach the adequacy of the data upon which conclusions were based. To avoid this difficulty it was necessary to resort to the records of those commissions which are given authority by state statutes to fix the minimum price which the sale of the securities should net the utility, or which are empowered to require the utility to file with the commission, after the securities have been marketed, a statement showing the price which the utility actually received from the bankers.[2]

While the limitations imposed by such gaps in statistical data are appreciated, it is believed that the study of 550 cases, aggregating over $1,600,000,000 par value of securities, gives a substantial foundation upon which to base some general conclusions.

Method of Study

Reference to the accompanying tables discloses the fact that the cost of money has been predicated on the net amount of cash received by the public utility from the sale of its securities. This process of calculation represents the only one which accurately depicts the cost of obtaining money to a public utility enterprise. Any computation which bases the cost of money on the par value of securities floated or on the number of units of each type of security issued, ignores the fact that the amount of funds received by the utility to pro-

[2] The calculation of the cost of money based on the minimum price fixed by a public service commission gives accurate results. The experience of the commissions shows that it is the universal practice to set the minimum price only after a thorough investigation into the preliminary negotiations of the utility and the banker, and the state of the investment market. In many cases the utility has arranged for the sale of the securities with the banker at a fixed price before the application for authority to issue is filed with the commission. Frequently at the hearing before the commission the utility is required to present, as part of its evidence, the form of contract proposed to be entered into between itself and the banker. This tentative contract sets forth the price at which the banker is willing to take the issue, and the commission then fixes the contract price as the minimum at which the securities may be sold.

TABLE IV. COST OF OBTAINING MONEY TO GAS COMPANIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK, JANUARY, 1914—DECEMBER, 1922, INCLUSIVE

YEAR	Par Value A (Dollars)	Price Received by Company from Bankers B (Dollars)	Bankers' Sales Price C (Dollars)	Bankers' Commission D (Dollars)	Percentage Cost of Money D/B
BONDS					
1914	1,575,000	1,496,250	1,575,000	78,750	5.263
1915	1,415,000	1,251,720	1,368,550	116,830	9.334
1916	10,274,000	9,442,580	10,136,073	693,493	7.344
1917	2,500,000	2,337,500	2,437,500	100,000	4.278
1918	2,503,000	2,295,398	2,450,745	155,347	6.768
Total 1914-1918	18,267,000	16,823,448	17,967,868	1,144,420	6.803
1919	16,800,000	16,162,000	16,780,000	618,000	3.824
1920 There were no issues of bonds made during 1920 for which complete information was available.					
1921	10,150,000	9,506,750	9,942,921	436,171	4.588
1922	41,772,000	38,436,820	41,029,140	2,592,320	6.744
Total 1919-1922	68,722,000	64,105,570	67,752,061	3,646,491	5.688
Total 1914-1922	86,989,000	80,929,018	85,719,929	4,790,911	5.920
NOTES					
1914 There were no issues of notes made during 1914 for which complete information was available.					
1915	150,000	139,500	148,500	9,000	6.452
1916, 1917 There were no issues of notes made during these years for which complete information was available.					
1918	2,225,000	2,108,633	2,174,938	66,305	3.144
Total 1914-1918	2,375,000	2,248,133	2,323,438	75,305	3.350
1919	900,000	828,000	865,000	37,000	4.469
1920	11,400,000	10,938,750	11,241,750	303,000	2.770
1921	35,200,000	34,585,070	35,316,250	731,180	2.114
1922 There were no issues of notes made during 1922 for which complete information was available.					
Total 1919-1922	47,500,000	46,351,820	47,423,000	1,071,180	2.311
Total 1914-1922	49,875,000	48,599,953	49,746,438	1,146,485	2.359

vide extensions to plant and to purchase equipment is to be measured by the actual cash received. When the calculation of the cost of obtaining money is founded upon the net cash received by the utility, it furnishes an accurate basis for demonstrating how much should be included in the valuation of a public utility property for this particular item. The justice of giving due consideration to the actual cost of money to a public utility in determining the fair value of the utility's property is a matter outside the scope of the present study.

Before proceeding to examine the figures in detail, it may be well to state some general facts pertinent to the tables. In every case the years appearing in the tables represent calendar years. It will be observed that there are disconcertingly wide variations in the total amount of data available for different types of utilities. The gaps in the statistical tables, however, are to be accounted for by the lack of original source data. The mere absence of statistical data concerning bond or stock issues of a certain type of utility during a particular year does not necessarily mean that that type of utility did not float securities in that year; it may signify that complete information either as to the amount offered or as to the price received by the company from the

TABLE IV *(Continued.)* COST OF OBTAINING MONEY TO GAS COMPANIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK

Year	Par Value A (Dollars)	Price Received by Company from Bankers B (Dollars)	Bankers' Sales Price C (Dollars)	Bankers' Commission D (Dollars)	Percentage Cost of Money D/B
STOCK					
1914	254,500	254,500	262,135	7,635	3.000
1915, 1916 There were no issues of stock made during these years for which complete information was available.					
1917	500,000	435,000	480,000	45,000	10.345
1918 There were no issues of stock made during 1918 for which complete information was available.					
Total 1914-1918	754,500	689,500	742,135	52,635	7.634
1919, 1920 There were no issues of stock made during these years for which complete information was available.					
1921	400,000	380,000	400,000	20,000	5.263
1922 There were no issues of stock made during 1922 for which complete information was available.					
Total 1919-1922	400,000	380,000	400,000	20,000	5.263
Total 1914-1922	1,154,500	1,069,500	1,142,135	72,635	6.791

bankers or as to the banker's sales price, was not available, and, consequently, that no accurate calculation could be made.

No common stock is included in the figures under the general head "Stock" in any of the statistical tables appearing subsequently. This may be partially explained by the common stipulation of state statutes requiring that stock be first offered to the stockholders of record before it can be offered to the general public, thus depriving the investigator of data essential to a calculation of the cost of money. The absence of common stock in the calculation is also ascribable to the relative infrequency with which this type of stock is offered to the investing public. Rising operating costs and a tendency toward increasing stringency in commission regulation have frequently reacted injuriously on public utilities throughout the United States, with the result that utilities have often been compelled to resort to senior financing, lacking the requisite credit status to sponsor flotations of stock. In a measure, therefore, the absence of common stock tends to reflect the rather unenviable credit position of utilities during the period under consideration.

The years for which data were obtained are 1914 to 1922, inclusive. During this period the investment market went through practically a complete cycle. The picture is therefore as complete as limitations of the data permit. Adequate material for bringing this investigation up to date was not available at the time of writing.

Cost of Money to All Types of Public Utilities

For a convenient summary, Table I shows the cost of bond, note, and stock money to all types of utilities by years from 1914 to 1922, inclusive. This table substantiates what is generally known; namely, that the cost of obtaining money is lowest when it is acquired by sale of notes and that the cost increases progressively with the use of bonds and stocks, respectively. The

TABLE V. COST OF OBTAINING MONEY TO TELEPHONE COMPANIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK, JANUARY, 1914—DECEMBER, 1922, INCLUSIVE

YEAR	Par Value A (*Dollars*)	Price Received by Company from Bankers B (*Dollars*)	Bankers' Sales Price C (*Dollars*)	Bankers' Commission D (*Dollars*)	Percentage Cost of Money $\frac{D}{B}$
BONDS					
1914	13,000,000	12,289,000	12,955,000	666,000	5.419
1915, 1916, 1917, 1918 — There were no issues of bonds made during these years for which complete information was available.					
Total 1914-1918	13,000,000	12,289,000	12,955,000	666,000	5.419
1919	26,100,000	25,512,000	26,317,000	805,000	3.155
1920	25,000,000	22,625,000	23,750,000	1,125,000	4.972
1921	50,500,000	46,975,000	49,000,000	2,025,000	4.311
1922	25,165,000	22,907,575	23,665,000	757,425	3.306
Total 1919-1922	126,765,000	118,019,575	122,732,000	4,712,425	3.993
Total 1914-1922	139,765,000	130,308,575	135,687,000	5,378,425	4.127
NOTES					
1914	2,500,000	2,453,500	2,487,500	34,000	1.38
1915 There were no issues of notes made during 1915 for which complete information was available.					
1916	2,000,000	1,985,000	2,000,000	15,000	0.756
1917 There were no issues of notes made during 1917 for which complete information was available.					
1918	1,300,000	1,235,000	1,274,000	39,000	3.158
Total 1914-1918	5,800,000	5,673,500	5,761,500	88,000	1.551
1919	90,000,000	86,900,000	89,325,000	2,425,000	2.791
1920	26,000,000	24,916,380	25,352,090	435,710	1.749
1921, 1922 — There were no issues of notes made during these years for which complete information was available.					
Total 1919-1922	116,000,000	111,816,380	114,677,090	2,860,710	.558
Total 1914-1922	121,800,000	117,489,880	120,438,590	2,948,710	2.510

Stock—There were no issues of stock made during the period 1914-1922, inclusive, for which complete information was available.

weighted average cost to all utilities for the entire period of money raised by notes was 3.432%; for bond money, 5.907%; and for stock money, 8.488%. The weighted average cost for all classes of securities covered by this study was 5.303%. The last figure, however, must not be taken too seriously, for it is lower than would be the case if complete information on all classes of securities were available. Of the reported issues approximately 69.69% of the total net cash received came from bond sales, 27.42% from sales of notes, and only 2.89% from stock issues. In view of the fact that normally about 25% of total utility financing is by stock issues,[3] it is evident that the composite cost of money would have been appreciably higher than 5.303% if the requisite data pertaining to stock money had been available. Furthermore, the stock issues reported here are preferred rather than common. Had data been at hand to compute the cost of obtaining money by common stock issues as well as a due proportion of preferred stock issues, the weighted average cost would unquestionably have been materially higher.

It will also be seen from Table I that

[3] *Cf.* Dorau, H. B., "Public Utility Financing, 1919-1925," THE JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS, July, 1925, p. 310.

the relative volumes of bonds, notes, and stock fluctuated with the general trend of the business cycle. This is evident even after making due allowance for the fact that the issues reported here are only a portion of the total volume of securities offered on the market. There seems to be no inexplicable deviation from the trends established by Professor Mitchell's careful analysis; the amount of bonds floated tended generally to increase in times of depression and business revival and to decrease in times of prosperity. The 200% increase in the par value of bonds floated in 1919 compared with 1918 is explained largely by the removal of stringent war-time restrictions on capital issues. It will be noticed, too, that the cost to the utilities of obtaining bond money was highest in 1920 and 1922 and lowest in 1919, a good year on the whole. The cost of bond money from 1919 to 1922 was somewhat higher than for 1914-1918.

The tendency of public utility managers to resort to short-term note issues in order to avoid long-term borrowing at higher interest rates than will eventually prevail is unmistakably shown. Uncertain conditions prevailing in the money and investment markets in 1917, 1918, and 1919 are reflected in abrupt increases in total amounts of notes offered. But as liquidation began and depression set in, the volume of note issues dropped more than 50% from 1920 to 1921. Contrary to the trend of cost of money raised by bond issues, the years from 1914 to 1918 were the high-cost period for note issues.

The lack of data for stock issues during 1914-1918 vitiates any comparisons with the post-war period. The figures obtainable for the latter period indicate very clearly the well-known tendency of investors to forsake low-yield securities for stock when business prospects seem on the up-grade. The higher cost of money to utilities raising funds in this way, as compared with bonds or notes, is shown in the table.

Cost of Money to Electric Light and Power Companies

Table II shows that of the total amount of electric utility bonds floated from 1914-1922, 26.06% were sold in the period 1914-1918. As might be expected from the uncertain bond and money markets in the earlier period, 55.83% of the total note issues were sold during the war period. With reference to stock, a disproportionately large amount (93.65%) of the total stock issues reported was issued in the post-war period. One factor in this situation was the wider acceptance of junior securities of electric utilities as a result of the educational work carried on in connection with customer ownership campaigns.

It will be noted that the cost of money through the sale of notes, bonds, and stock increases progressively for each type of security from the war period, 1914-1918, to the post-war period, 1919-1922. The lowest cost of obtaining bond money occurred in the year 1917, when the cost was 4.828% of the net cash received by the utilities; while the highest cost occurred in the year 1914, when it amounted to 7.336%, although the cost of bond money in 1922 approximated very closely the high point of 1914, the difference being less than 1/10 of 1%. As for the cost of note money, it will be seen that there was very little difference in this cost in the period 1914-1918 as contrasted with the subsequent period, 1919-1922. The cost in 1916 must be discounted somewhat since it represents the flotation of

TABLE VI. COST OF OBTAINING MONEY TO WATER COMPANIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK, JANUARY, 1914—DECEMBER, 1922, INCLUSIVE

YEAR	Par Value A (*Dollars*)	Price Received by Company from Bankers B (*Dollars*)	Bankers' Sales Price C (*Dollars*)	Bankers' Commission D (*Dollars*)	Percentage Cost of Money $\frac{D}{B}$
BONDS					
1914, 1915 There were no issues of bonds made during these years for which complete information was available					
1916	800,000	720,000	800,000	80,000	11.111
1917	2,005,000	1,743,750	1,859,750	116,000	6.652
1918 There were no issues of bonds made during 1918 for which complete information was available.					
Total 1914-1918	2,805,000	2,463,750	2,659,750	196,000	7.955
1919	580,000	546,800	577,500	30,700	5.614
1920 There were no issues of bonds made during 1920 for which complete information was available.					
1921	5,300,000	5,009,800	5,294,000	284,200	5.673
1922	3,000,000	2,925,000	3,060,000	135,000	4.615
Total 1919-1922	8,880,000	8,481,600	8,931,500	449,900	5.304
Total 1914-1922	11,685,000	10,945,350	11,591,250	645,900	5.901
NOTES					
1914	1,000,000	980,000	1,000,000	20,000	2.041
1915, 1916 There were no issues of notes made during these years for which complete information was available.					
1917	400,000	378,000	392,640	14,640	3.873
1918	1,250,000	1,190,625	1,225,000	34,375	2.887
Total 1914-1918	2,650,000	2,548,625	2,617,640	69,015	2.708

some three-year 6% convertible notes by one company whose financial position was none too strong. The relative stability of the cost of note money during the years 1920-1922 is noteworthy, although the scant data upon which the 1922 figure is calculated destroy somewhat the effectiveness of the comparison.

The cost of stock money shows a decided increase in the post-war period over the war period, amounting approximately to 2½%. The pronounced fluctuation in the cost of stock money during the post-war period is to be accounted for by the fact that the cost for 1920 is predicated upon one issue of about $2,000,000 floated by an eastern utility of presumably poor credit standing, for the cost reached the rather abnormal figure of 16.667%. In view of the fact that the cost of stock money of 11.186% for the year 1922 is based upon 14 distinct issues covering 7 different companies in 5 different states, it is difficult to avoid the conclusion that electric light and power companies at that time confronted a serious situation in obtaining money through the sale of junior securities.

It will be noted that the cost of bond money for 1919-1922 is about 0.5% higher than for the war period 1914-1918. The yearly fluctuations, however, show such a range of variation that deductions are futile. The cost of note money increased in the post-war period, contrary to the tendency noted in Table I. In this connection, the abrupt decline in industrial activity affecting the money market and particularly short-term loans must not be lost sight of. With reference to the cost of

TABLE VI *(Continued)*. COST OF OBTAINING MONEY TO WATER COMPANIES IN THE UNITED STATES THROUGH SALE OF BONDS, NOTES, AND STOCK

Year	Par Value A (Dollars)	Price Received by Company from Bankers B (Dollars)	Bankers' Sales Price C (Dollars)	Bankers' Commission D (Dollars)	Percentage Cost of Money D/B
1919 There were no issues of notes made during 1919 for which complete information was available.					
1920	2,950,000	2,894,625	2,937,625	43,000	1.486
1921, 1922 There were no issues of notes made during these years for which complete information was available.					
Total 1919-1922	2,950,000	2,894,625	2,937,625	43,000	1.486
Total 1914-1922	5,600,000	5,443,250	5,555,265	112,015	2.058
STOCK					
1914, 1915, 1916, 1917, 1918 There were no issues of stock made during these years for which complete information was available.					
1919	535,000	502,900	529,650	26,750	5.319
1920	295,000	265,500	295,000	29,500	11.111
1921	220,000	198,000	220,000	22,000	11.111
1922 There were no issues of stock made during 1922 for which complete information was available.					
Total 1919-1922	1,050,000	966,400	1,044,650	78,250	8.097
Total 1914-1922	1,050,000	966,400	1,044,650	78,250	8.097

stock money the absence of figures for the years 1915-1916 makes it unwise to draw any general conclusions from the figures as they stand.

Although the high cost of money to electric light and power companies as compared with other types of utilities is in part due to the fact that the statistical basis of the calculation indicates more accurately typical conditions, yet it is to be remembered that the electric light and power industry has been subjected to unusual demands for expansion and accelerated changes in the art of generating and transmitting electricity, both of which are undoubtedly reflected in the higher cost of obtaining money. It must be remembered, also, that the calculation for electric utilities includes numerous small companies which have only a limited market for their output and whose cost of obtaining money tends to increase the weighted average cost.

Cost of Money to Electric Railways

Of the $168,746,400 par value of bond money upon which the cost of money to street railways was based, $112,106,400, or 66.43%, represented bond issues floated in the war period. Approximately the same condition exists with reference to the par value of notes floated in the two periods. Of the total amount of notes, aggregating $93,459,000, approximately 78.04% were issued in the war period. Since stock issues upon which information is available numbered only two, there is not sufficient data upon which to compare the issues in the different periods.

As in the case of electric light and power companies, the average cost to electric railways of obtaining money through the sale of notes and bonds rose progressively for each type of security from the war period, 1914-1918, to the post-war period, 1919-

1922. The lowest cost of bond money occurred in 1916, when it amounted to 3.865%; while the highest cost was attained in 1921, when it was 8.396%. With reference to the cost of note money, the low point was reached in the year 1916, when it was 1.644%; and the high point in the year 1921, when it was 5.850%. Again, the same relative stability of cost exists in favor of note money as contrasted with bond money; the average cost of bond money rose 1.4% from the war period to the post-war period, while note money rose only 1%. It is interesting to note that the average cost of bond money to electric railways for the post-war period was higher than for any other individual group of utilities in the United States, a situation which presumably reflects the critical financial straits of the electric railways.

TABLE VII. TYPE OF ORGANIZATION USED BY PUBLIC UTILITIES IN LOCAL SALES OF PREFERRED STOCK

Company Number	Number of Executives Directing Campaign	Number of Clerks Working on Campaign	Average Size of Permanent Stock Selling Organization
1	(*)	(*)	8
2	1	2	None
3	2	(*)	10
4	2	6	None
5	2 (President) (Gen. Supt.)	None	None
6	2	10	None
7	1	2	3
8	2	6	None
9	1 (3rd Vice-Pres.)	2	4
10	3	4	10
11	1 (Part time)	1	2
12	1	5	None
13	2	2	None
14	2 (Vice-President)	2 (Average)	3 (Mgr. Stock Selling, Assist. Mgr. Selling Dept.)
15	1	10	8
16	1 Part Time	None	None
17	(*)	(*)	4
18	2	11	None
19	1	4	None
20	3	40	25
21	1	3	9
22	2	10	None
23	2	5	2
24	2	2	2
25	1	2	5
26	1	2	5
27	2	12	None
28	3	4	10
29	1	1	5

(*) No information given.

Cost of Money to Gas Utilities

Comparing the experience of gas utilities with electric light and power and electric railway companies, a reversal of trend is found. Whereas the latter utilities obtained most of their bond and note money in the war period, gas companies issued during 1914-1918 only 21% of the total bonds and 4.76% of the total notes reported. However, 65.35% of the stock issues in the computation were made in the war period. These proportions, however, as well as the cost of money figures, are seriously affected by the lack of complete information for note and stock issues in several years.

The cost of money to gas utilities presents an interesting phenomenon in that the average cost for notes, bonds, and stock declined progressively from the war period to the post-war period, the drop being from 6.803% to 5.688% for bonds, from 3.350% to 2.311% for notes, and from 7.634% to 5.263% for stock. In view of the fact that this decline exists in spite of the fact that the cost of money for the period was calculated on a greater amount of securities in the post-war period than in the war period, it seems reasonable to conclude that the credit of gas companies improved. It is particularly significant that while gas companies were able to obtain bond money in the latter period at a cost that was 1.2% less than in the war period, electric light and power companies and street railway companies were compelled to pay 1.5% more for bond money, and also that gas companies obtained stock money 2.4% less in the post-war period than in the war period, although electric light and

power companies paid 2.4% more. The low cost of bond money occurred in the year 1919, when it amounted to 3.824%; whereas the high cost of bond money occurred in the year 1915, when it was 9.334%. The cost of note money was least in 1921 at 2.114% and was highest in 1915 at 6.452%. The cost of stock money on the three issues included in the calculation shows an extremely wide variation and emphasizes the weight which the various factors previously detailed inject into any calculation of the cost of obtaining money.

The Cost of Money to Telephone Companies

Table V shows that of the $139,765,000 par value of telephone company bonds issued during the entire period under consideration, 9.30% were floated in the war period. Of the total $121,800,000 of notes, 4.76% were issued from 1914 to 1918. There were no stock issues by telephone companies throughout the entire period for which complete information was available, and, hence, no cost of stock money is incorporated in this table.

The cost of obtaining money to telephone companies shows the same general tendencies with reference to bonds as in the case of gas companies, namely, a decline in the cost from the war period to the post-war period. This decline was from 5.419% to 3.993%, or a net decrease of 1.5%. On the other hand, the cost of note money jumped from 1.551% for the war period to 2.558% in the post-war period, an increase of 1%. The low cost of obtaining bond money occurred in the year 1919, when it was 3.155%; the high point was reached in 1914, when it was 5.419%. Note money could be obtained most cheaply in the year 1916, when the cost was 0.756%, and was most expensive in the year 1918, when it was 3.158%.

Cost of Money to Water Companies

For the period 1914-1922, $11,685,000 par value of bonds were issued by water companies in the United States,

TABLE VIII. PERCENTAGE DISTRIBUTION OF TOTAL SELLING EXPENSE IN LOCAL STOCK SALES CAMPAIGNS

Company Number	Salesmen's Commissions	Advertising	Printing and Stationery	Transportation	Postage	Executives' Salaries	Rent	Miscellaneous	Total
230	59.00	12.00	.....	.....	.....	.....	....	29.00	100.00
21	65.00	4.00	.....	10.00	.....	20.00	....	1.00	100.00
24	61.50	8.11	1.80	.....	.....	28.59	....	.....	100.00
229	25.00	28.00	7.00	25.00	3.00	.....	....	12.00	100.00
53	68.70	31.30	.....	.....	.....	.....	....	.....	100.00
231	65.00	11.00	22.00	.....	2.00	.....	....	.....	100.00
76	50.00	.....	.....	.....	.....	.....	....	50.00	100.00
232	36.68	21.28	4.59	17.39	0.06	.....	....	20.00	100.00
86	25.40	49.39	6.30	.....	3.19	10.36	0.11	5.25	100.00
99	48.80	42.80	.....	.....	.....	.....	....	8.40	100.00
233	95.21	4.79	.....	.....	.....	.....	....	.....	100.00
248	10.00	34.00	.....	.....	.....	.....	....	56.00	100.00
121	42.20	34.50	13.10	.....	.....	12.20	....	.....	100.00
129	38.04	23.78	8.15	1.03	1.77	20.32	0.33	6.58	100.00
135	46.00	12.10	16.10	5.00	.....	16.20	....	4.60	100.00
235	3.00	16.00	26.00	28.00	11.00	.....	....	16.00	100.00
157	59.10	17.40	10.10*	8.90	.....	.....	....	4.50	100.00
171	38.12	54.40	2.95	.....	0.63	2.63	0.18	1.09	100.00
236	48.00	13.00	3.00	29.00	2.00	.....	....	5.00	100.00
176	41.00	18.00	17.00	5.00	.....	19.00	....	.....	100.00
214	50.00	.....	.....	.....	.....	.....	....	50.00	100.00
239	58.50	30.90	.....	.....	.....	.....	....	10.60	100.00
237	48.96	12.52	6.52	15.51	.....	.....	....	16.49	100.00

*Includes postage.

of which $2,805,000, or 24.01%, were issued in the war period. The par value of notes issued for the entire period aggregated $5,600,000, of which $2,650,000, or 47.32%, were issued in the war period. With reference to the stock of the water companies, there were no issues of stock made during the war period for which complete information was available, while in the post-war period, $1,050,000 par value was floated.

It will be noted that in the case of both bonds and notes the cost of obtaining money was less for water companies in the post-war period than in the war period, following the similar trend for gas and telephone utilities. For bonds this decline was from 7.955% to 5.304%, or a net decline of 2.6%; while for notes the decrease was from 2.708% to 1.486%, a net decrease of 1.3%. The lowest cost of bond money occurred in 1922 and amounted to 4.615%, while the highest cost of bond money was 11.111% in 1916. Note money was cheapest in 1920 at 1.486% and most expensive in 1917 at 3.873%. While the average cost of bond money to water companies was approximately 1.8% higher than the cost of bond money to telephone companies, yet the average cost of note money was approximately 0.5% less for water companies

TABLE IX. COST OF OBTAINING MONEY THROUGH SALES OF PREFERRED STOCK LOCALLY

Approx. Date of Offering	Company Number	Description of Securities Sold	Par Value A (Dollars)	Net Amount Realized by Company less Expense of Selling B (Dollars)	Price Received by Company from Buyer C (Dollars)	Selling Expenses D (Dollars)	Percentage Cost of Money D/B
5-5-22	230	6% Cumulative Preferred	73,000	58,863	61,320	2,457	4.17
1919-1923	21	6% Preferred	3,456,660	2,800,617	2,973,447	172,830	6.17
2-14-22	229	Preferred	201,200	186,160	201,200	15,040	8.08
July 1922	53	7% 1st Preferred	331,200	314,350	331,200	16,850	5.36
1-1-22	231	7% Cumulative Preferred	22,650	21,650	22,650	1,000	4.62
to 12-31-19	66	7% Cumulative Preferred	90,600	84,502	90,600	6,098	7.22
1-1-20 to 8-3-20	66	7% Cumulative Preferred	66,300	57,937	66,300	8,363	14.43
4-11-21	76	8% Preferred	1,200,000	1,164,000	1,200,000	36,000	3.09
June, 1920, and Aug., 1921	232	8% Cumulative	465,000	438,707	465,000	26,293	5.99
1921	86	7% Cumulative Preferred	2,449,800	2,014,970	2,082,330	67,360	3.34
1922	86	7% Cumulative Preferred	4,424,600	3,861,552	3,926,833	65,281	1.69
1921	99	8% Preferred	3,027,300	2,888,429	3,027,300	138,871	4.81
1922	99	7% Preferred	1,910,100	1,826,518	1,910,100	83,582	4.58
1918	233	7% Preferred	264,800	256,456	264,800	8,344	3.25
5-16-21	234	6% Cumulative Preferred	995,925	690,174	756,903	66,729	9.67
6-4-20 to 8-31-22	129	7% Non-Par Cumulative Preferred	2,990,200*	2,540,666	2,804,243	263,577	10.37
1921-1922	135	7% Cumulative Preferred	1,354,400	1,204,103	1,280,376	76,273	6.33
5-23-21	199	8% Cumulative Preferred	6,335,400	6,161,177	6,335,400	174,223	2.83
5-7-17	171	7% Preferred	7,000,000	6,650,911	7,000,000	349,089	5.25
10-16-22	236	7% Cumulative Preferred	158,400	150,226	158,400	8,174	5.44
1-15-21	176	7% Cumulative Preferred	1,220,000	1,172,505	1,220,000	47,495	4.05
1920-1921	214	6% Preferred	121,700	103,445	108,313	4,868	4.71
1921-1922	214	8% Preferred	275,700	264,672	275,700	11,028	4.17
July, 1921	188	7% Cumulative Preferred	3,544,800	3,298,791	3,367,560	68,769	2.08
July, 1919	238	6% Cumulative Preferred	3,093,400	2,474,101	2,536,588	62,487	2.53
8-22-19	237	7% Preferred	441,800	423,752	441,800	18,048	4.26
Mar., 1920	239	7% Preferred	500,000	490,765	500,000	9,235	1.88
Oct., 1920	239	7% Preferred	1,000,000	953,000	1,000,000	47,000	4.93
Apr., 1922	239	7% Preferred	500,000	476,755	500,000	23,245	4.88
			47,514,935	43,029,754	44,908,363	1,878,609	4.366
1914-1922	242						$5 per Share
	240						$5 per Share
	245						$5 per Share
	244						$5 per Share
	246						$5 per Share
	241						$5 per Share
	247						$5 per Share
	243						$5 per Share

*29,902 shares (no par value) redeemable, in case of liquidation, at $100 a share.

than for telephone companies. In so far as the scant data warrant any comparison, the average cost of stock money to water companies for the period 1914-1922 was 1.3% higher than the cost of stock money to gas companies. Contrariwise, the cost of bond and note money was smaller for water companies than for gas companies over the same period.

Cost of Money Obtained through Sales of Preferred Stock Locally

While public utilities first resorted to the sales of preferred stock to customers and employees in 1907, the first campaign designed to effect a broad distribution of securities among customers and employees and to raise substantial sums for extending the facilities of the utility was inaugurated in 1914 by the Pacific Gas and Electric Company of California. Almost simultaneously the Denver Gas and Electric Light Company sponsored a similar campaign in the territory which it served. It is rather significant that the initial effort seeking to distribute the junior securities of public utilities among customers and employees should have originated within several years after the concentrated organization and development of commission regulation in the United States. Considering the fact that the initial campaigns were undertaken at a time of industrial depression, their success demonstrated that the sale of securities locally not only afforded an opportunity of developing good-will for the utilities, but furnished an extensive and permanent market from which capital requisite for plant expansion might be drawn at reasonable cost.

In so far as the financial program of the utility is involved, sales of preferred stock locally have furnished a solution reasonable in cost and apparently permanent in character. Experience in the management of local preferred stock campaigns has shown that if the first compaign can be prosecuted successfully, the foundation has been laid for a continuous market for similar securities. Customers or employees that have once been convinced of the investment value of preferred stock of a local utility furnish a nucleus for further sales, and the experience of the administrators of such stock sales universally indicates that subsequent sales can be carried on almost regardless of the season of the year or the tone of the investment market. With changes in business conditions there are recurrent periods in which it is difficult, if not impossible, to market junior securities through bankers except at prohibitive prices. Yet there is no sound reason why a utility with unquestioned earning power and an established record of dividends cannot tap sources of savings existent in every community regardless of untoward developments in the money and investment markets. When it is recalled that the statistical analyses of the investment market demonstrate the handicaps to senior financing in periods of prosperity, it will be seen that a utility that has successfully prosecuted a preferred stock campaign may be fortunately situated with regard to extensions and improvements at a time when they are most likely to be ordered by a public service commission. The utility is in a position not only to raise these funds frequently at lower cost than would be practicable with the sale of bonds, but it also enjoys the advantage in its financial set-up of increasing the equity money in the property, so that if at any future time it is compelled to resort to the bond market it can do so with the knowledge that in all probabil-

ity the cost of obtaining money will be appreciably less. The testimony of operators is to the effect that the sales of securities locally, if directed by a competent and efficient personnel, may be carried on in periods of industrial depression as well as in periods of prosperity.[4]

Although frequently a public utility has been confronted with a negative attitude on the part of bankers toward its customer-ownership campaigns, the general attitude of the bankers is distinctly favorable. Statistics relating to the number of the utility's securities held among local investors prove an excellent selling argument for the investment banker in assuring prospective bondholders that the local company enjoys a satisfactory standing in the community served. Moreover, a wide and comprehensive ownership of the local utility's securities seems to be regarded as an unusually satisfactory assurance that the utility is safeguarded against unfair rate agitation and attacks by demagogues seeking to make political capital out of legitimate business profits.

It must be recognized that the existence of this avenue of raising funds through the sale of preferred stock does not mean that any public utility can take advantage of it. Before a utility is in a position to enjoy this relatively low cost of obtaining money, its financial condition must be such that there is little likelihood of foregoing interest payments on funded debt or of passing dividends on stock. The universal testimony of utility operators who have had practical experience with local preferred stock sales is that nothing is so deleterious to the credit of the utility as its inability,

TABLE X. COST OF OBTAINING MONEY TO PUBLIC UTILITIES THROUGH SALES OF PREFERRED STOCK LOCALLY AND SALES OF BONDS BY BANKERS

Approximate Date of Offering	Number of Company	Cost of Obtaining Money	
		Through Sale of Preferred Stock Locally	Through Sale of Bonds
1919	21	6.17	5.882
July, 1922	53	5.36	6.127
1919	66	7.22	5.307
1-1-20	66	14.43	5.307
4-11-21	76	3.09	8.191
1921	86	3.34	4.451
1922	86	1.69	4.451
1921	99	4.81	5.955
1922	99	4.58	5.955
6-4-20	129	10.37	6.701
1921	135	6.33	8.709
5-23-21	199	2.83	5.333
1-15-21	176	4.05	4.822
1920	214	4.71	11.782
1921	214	4.17	11.782
July, 1921	188	2.08	8.031

even though it be temporary, to satisfy with dividends the legitimate expectations of its stockholders. In brief, the development of this form of distributing junior securities is likely to be confined to those utilities operating in thickly populated territories, with well-established industries and a constantly growing clientele assuring the utility at all times of a stable earning power. Based upon such conditions, the sales of preferred stock locally can be accomplished at relatively lower cost than the same securities could be distributed through bankers. However, as the figures submitted herewith show, utilities still in their developmental stages or serving sparsely settled communities, or communities thickly populated with foreigners, have not been able to market their preferred stock locally at such low cost.

Sales of preferred stock locally may be roughly classified into two types,

[4] Pacific Gas and Electric Company sold $3,785,100 of its preferred stock to customers during the depression of 1915 following the World War. The experience of the Denver Gas and Electric Light Company also demonstrates the feasibility of raising funds at minimum cost even in a period of depression. (Appendix to Report of Committee on Sale of Company's Securities to Customers and Resident Citizens, National Electric Light Association *Bulletin*, September, 1920, p. 627.)

first, the sales of preferred stock to customers and employees, through the efforts of the utility's own personnel, both as to executive management and the actual detailed work of selling the securities, and second, the sales campaign where the administrative work is done by a staff not connected with the utility although the detailed sales work is done by the utility's own employees. In so far as answers to questionnaires sent out to certain public utility companies show a preference for either method, the first type is generally adopted. Table VII indicates approximately the nature of the organization used in these campaigns.

Numerous operating companies in the United States resort to utility management corporations for executive management and advice, and where this arrangement exists the supervision and direction of local preferred stock sales campaigns have been entrusted to the management corporation. It was impossible, however, to obtain from any of these operating companies the desired information.

It will be noted that with 14 out of 23 companies approximately 50% or more of their total expenditures were allotted to salesmen's salaries or commissions. (Table VIII.) This would seem to indicate that the success of such a campaign depends primarily upon the diligence and perseverance with which the personal sales work is conducted. Corroborating evidence supports this conclusion. In recent hearings before a public service commission of one of the eastern states, the manager in charge of the local stock sales campaign testified that while on the average seven shares of stock were held by each customer-owner that had bought stock in the course of a campaign extending over two and a half years, yet it required six or eight calls per customer to attain this average.

The next expenditure of importance incurred in the local stock sales campaign was for advertising, this item appearing in 19 out of 21 tabulations and generally representing a substantial percentage of the total expenditures. The combined advertising and printing and stationery expenses account for practically all of the remaining expenses incurred in the sales campaign. In passing, it may be observed that there is a wide variation in the expenditures for printing and stationery as submitted by the 12 companies listing this item.

Particularly interesting is the fact that although only 8 out of the 23 companies allocate any expense to the item "Executive Salaries," all of these represent large operating companies. It is significant that 4 of these 7 companies show a cost of money materially less than that of the remaining 16 companies.

The cost of obtaining money through the sale of preferred stock to customers has been computed in exactly the same fashion as in the detailed tables discussed previously. The comparative newness of the customer-ownership movement, affecting the number of companies that have adopted this plan as well as the amount of securities in dollars that have been thus distributed, makes possible only tentative conclusions. The same factors conditioning the cost of money previously outlined, such as the credit rating of the company issuing the preferred stock, geographic location, type of market served, and so forth, also apply to Table IX.

The reluctance of some utilities to furnish data makes the table far from adequate. Nevertheless, it may prove helpful in comparing the cost of obtaining money through sales of preferred

stock locally with the cost incurred through sales by bankers.

Table IX indicates a comparatively wide variation in the cost of obtaining money through the sale of preferred stock locally, ranging from 1.69% in the case of Company Number 86 to 14.43 in the case of Company Number 66. Although it is risky to draw any categorical conclusions from these relatively scattered data, the figures seem to indicate that the sale of preferred stock locally is of no particular financial benefit compared with sales through bankers where the company is comparatively new and undeveloped or where the territory is sparsely settled and the industries served are in a state of flux. For example, Company Number 66, representing a large utility in the West, operating in a relatively sparsely settled territory, shows a weighted average cost of obtaining money through sales of preferred stock locally of 10.152%, while the same company was able to obtain money through the sale of preferred stock by bankers at a cost of 8.015%. Company Number 129, which operates in a well-established industrial district of the East, but in which the foreign population constitutes an important element, shows a cost of obtaining money through the sale of preferred stock locally of 10.37% as contrasted with the cost of sales through bankers of 9.84%. In this particular instance, however, part of the excess cost involved in the sale of preferred stock locally may be accounted for by the fact that at the time the preferred stock sales were inaugurated, the company, evolved out of merger and consolidation of smaller companies, was comparatively unknown to investors. Nevertheless, there is ample evidence to show that companies with an established credit rating, serving densely populated communities with firmly established industries, may sell preferred stock locally at a cost noticeably lower than that involved in the sale of similar stock through bankers. Particularly is this true where the utility has developed a local market for its stock through successive campaigns over a period of years. An examination of the column "Cost of Obtaining Money" in Table X shows that in 20 out of 29 offerings money was obtained at lower cost through local sales than through the sale of preferred stock by bankers (this latter cost being measured by the weighted average of 8.488% in Table I). Table X shows that 9 companies were actually able to sell their preferred stock locally at lower cost than they could have disposed of senior securities through bankers.

OUR INDIAN LAND POLICY

By FLORA WARREN SEYMOUR

A GENERATION or two ago the cry of the westering pioneer was that "Uncle Sam is rich enough to give us each a farm." After the Emancipation Proclamation the expectation of the freedman was that he would be the recipient of "forty acres and a mule." When immigration began to inundate the cities of the East, a remedy was sought in an effort to direct the stream to the open lands of the West. Throughout the history of our nation this belief in the land has been a dominating influence. Acres for the taking have lured the settler farther and farther west and have brought behind his plow the smoke of the locomotive. The overwhelming industrial developments of the past century, the marvelous mechanical strides, have not yet weaned the heart of the people away from their allegiance to the soil.

It is not surprising that a people brought together in the first instance by hunger for the land, crowned with abundance by the development of their country's vast resources, should have fancied that in this same soil lay the solution of all the problems of the Indian. Each Indian was to have a farm, was to become a farmer; and all would be well.

The Clash of Different Cultures

But life is not a problem in simple addition or subtraction. The realization of the actual cultural status of the Indian as the white man first knew him was something the white man was slow to attain. The white settlers forgot that civilization, as they knew it, was a progress of ages, through definite stages slowly merging into one another. At the time of the discovery of America the European was still in a relatively simple stage; the development, organization, and specialization of industry was still far in the future. But simple as that state of society was, it was the the product of thousands of years. Chipped stone implements and picture writing belonged to the forgotten infancy of the race.

Such an infancy was the Indian's when the European first reached the new continent. In America the Stone Age was found again; found, only to be lost very speedily. To a people without beasts of burden or means of transportation came the horse; to a people of the stone arrowhead were given gun and ball and powder. Transformation came almost in the twinkling of an eye.

The lost histories of the world are always the most romantic; and the story of the spread of the horse over the plains of America is a thrilling tale that can never be told. When white men followed to the vast interior of the country, the Indian of the plains was the dauntless horseman, his home was in the saddle. In the folk stories, the myths of the early beginnings of his people, he had hidden his agricultural leanings, had there been any.

Status of Indian Agriculture

Many of the tribes did practice agriculture in differing degrees. This was true in greater measure of the coast Indians. The early English colonists learned of maize and bean and pumpkin from their red neighbors. The Pueblo tribes of the Southwest were primarily

agriculturists, and had developed a system of irrigation to supply the deficiencies of the rainfall in their arid lands. But except possibly among the Pueblos, agriculture was almost entirely the business of the women; hunting and warfare were the manly occupations. It was the loss, not of corn-fields, but of hunting grounds that the Indian bewailed. With bitter resentment he saw the green shafts of the wheat push upward from the soil which he had been wont to moisten with the blood of the buffalo and of his fellow Indian.

Indian Ideas of Landed Property

So when we loosely think of the red man as the original owner of the soil of our country, we are using a term and employing a concept that was never in the mind of the Indian himself. The history of mankind indicates that the feeling of private property in land is not instinctive, but a growth of ages. It was a feeling which the Indian had not then developed, and has yet, after close contact with the whites, to realize fully. Even the products of the soil were more nearly communal than individual property. The land itself was claimed by one tribe as against another, it is true, but only as a hunting ground, the right to be maintained by might alone. None had reached the stage of proclaiming him cursed who should remove his neighbor's landmark.

Though the early treaties between the colonists of the Atlantic seaboard and the Indians with whom they came in contact seem to recognize land ownership, in the light of today and its knowledge it seems quite improbable that either party to such a treaty knew what the other meant. That these treaties were broken is in a way less surprising than that they even temporarily remained intact. Both red men and white were in the flow of a universal tide that no individuals could withstand.

Conquest and Land Titles

Columbus, in planting the flag of Spain upon the shore of San Salvador and claiming the country in the name of the King of Spain, did but follow the custom of explorers of all the ages before him and the ages since. The theory that a land without organized government is the trophy of him who discovers it, is as old as discovery itself. The attitude of the native, the original inhabitant of the soil, had no bearing on the situation. Should he not be proud to own the sovereignty of the Spanish Crown? And above all, since he was heathen should the Indian not, indeed, be humbly grateful for the blessings of Christianity and civilization?

To the Crown, dominion—thus the theory ran; to the native, only the right of occupancy. For the time being the Indian had the right of possession, the right to roam the forest and the prairie, to hunt the buffalo or trap the fox. But the fee, the actual ownership, lay in the sovereign; and to none other than that sovereign might the native assign his right. In two ways would the Indian's limited title be extinguished: by conquest or by purchase. But the conqueror was the only one who might be the purchaser.

Spanish or French or English, the theory was the same, and the United States followed their example without a question. As the Supreme Court phrased it in *U. S.* v. *Rogers*[1]:

> The native tribes who were found on this continent at the time of its discovery have never been acknowledged or treated as independent nations by the European governments,

[1] 4 How. 567, at 572 (1846).

nor regarded as the owners of the territories they respectively occupied. On the contrary, the whole continent was divided and parcelled out, and granted by the governments of Europe as if it had been vacant and unoccupied land, and the Indians continually held to be, and treated as if, subject to their dominion and control.

Tribal Versus Individual Rights to Land

But in thus taking over control, the foreign government dealt with the Indians tribally and not individually, creating a sort of recognition of their native government. In the case of *Cherokee Nation* v. *Georgia*,[2] the situation was thus characterized:

> Though the Indians are acknowledged to have an unquestionable, and heretofore unquestioned, right to the lands they occupy, until that right shall be extinguished by a voluntary cession to our government; yet it may well be doubted whether those tribes which reside within the acknowledged boundaries of the United States can, with strict accuracy, be denominated foreign nations. They may, more correctly, perhaps, be denominated domestic dependent nations. They occupy a territory to which we assert a title independent of their will, which must take effect in point of possession when their right of possession ceases. Meanwhile, they are in a state of pupilage; their relation to the United States resembles that of a ward to its guardian.

Land Tenure Under the Reservation Policy

During the century while this theory prevailed, the "domestic dependent nations" made treaty after treaty with the United States. Mile by mile they retreated, relinquishing their hunting grounds. The natural result of the cession of their larger territory was the retention of smaller tracts, reserved for their use. Thus grew up the reservations where the tribes were presumed to live, refraining, it was the pious hope, from warfare with other tribes and with the whites, responding to the efforts of the missionary and the teacher, learning to till the soil and to "follow the white man's road."

This policy was not originated by the United States, but was the following out of the plan that had obtained from the beginning, or as soon as the pressure of the white population upon the natives had become a matter of any concern. In Canada, under both French and English rule, the idea had prevailed of confining the Indians within limits, the better to assure their control by the government. The United States began, in 1786, the long series of treaties that led to the establishment of reservations. The locating of the tribes west of the Mississippi was broached only a few years later, and became the settled policy by 1840.

This, however, was not the only method by which reservations were assigned to the Indian tribes. The whole method of dealing with the "domestic dependent nations" was changed in 1870, and simple agreements substituted thereafter for the solemn treaties that had been so often made and so easily broken. There were also conditions calling for a redistribution of land that had already lost its Indian character, and for the assignment of land to Indians who were without a foothold in the country of their nativity. So reservations have been created by order of the President, or by Act of Congress, from lands that were either public domain or purchased by the government on behalf of the Indians.

Besides this there have been a number of instances of purchase of lands by the Indians themselves, as in the case of the eastern Cherokees, or the Sac and Fox

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[2] 5 Pet. 1, at 17 (1831).

in Iowa. Their cession of such lands to the President or to the Secretary of the Interior, in trust for the tribe, creates a tenure of somewhat different nature, though in actual practice the results are much the same.

Two groups of Indians present strikingly different situations with respect to land tenure. The New York Indians, treating as an independent force with the scarcely formed nation at the end of the Revolution, achieved a status which still lends color to their contention that they are a separate group of nations, though but tiny communities within the borders of the state of New York. They are self-governing communities, following their own peculiar laws as to inheritance and property. With these the United States has at present no right to interfere; and without a change in the legal situation no redistribution of land could take place.

The independence of the Pueblo Indians in New Mexico was, until recently, even more strongly emphasized. They held their lands by grant from the King of Spain, with an unquestioned chain of title running well back into the seventeenth century. They came into our nation as citizens of the Republic of Mexico, and landlords under the laws of that country, as of Spain before her. After the Treaty of Guadalupe Hidalgo, Congress gave the Pueblos patents to their lands, these patents serving as a confirmation of the earlier grants. A decision of the United States Supreme Court in the Joseph case[8], in 1876, made it clear that the title of the Pueblo Indians antedated and was superior to that of the United States; that they were not to be considered as Indian tribes within the meaning of the intercourse acts of 1834, governing the relations of the nation with the roving Indians of the West; and that they were possessed of the legal right to do as they would with their own property. So the matter stood for many a year, until the Enabling Act, by which New Mexico came into the Union as a state, declared the Pueblo lands to be "Indian country," and threw over the whole matter a cloud of doubt which has yet to be lifted.

In addition to these two very special instances, the lands of the Five Civilized Tribes in Indian Territory or Oklahoma have always been the subject of special consideration and individual legislation from Congress. These "nations" had a degree of self-government from the time of their removal to the West, and held their lands under tribal patents, which would preclude their consideration as "reservations" in quite the same sense in which the word is applied elsewhere.

The Attempt to Make Indian Farmers

The creation of special reservations for Indian tribes involved a great deal more than a mere treaty or law. It meant, in many cases, an entire change in the method of living. With the plains Indians this was most strikingly the case. As warfare became less and less their main occupation, as the herds of buffalo began to diminish, it became apparent that some measures would have to be taken to offer them a new means of subsistence. The land was there, and to the American farmer it was a promise of life and even wealth. But to the Sioux or the Comanche, the Cheyenne or the Ute, it held no such allurement. The Indian lacked not only the knowledge of farming, but the disposition to acquire such knowledge, as a general thing. Even with the best of good-will he could not have scratched a living from the soil

[8] *United States* v. *Joseph*, 94 U. S. 614 (1876).

without aid; and his pride would, in most cases, have permitted him to starve rather than descend to the work of a squaw.

What resulted from this situation was perhaps the cruelest evil that the United States has visited upon the Indian—the ration system. Necessity created the practice of issuing beef and flour and the rest; but necessary evils are none the less demoralizing and vicious. The army would alternately fight and feed the natives of the plains; and looking now upon the results, it appears that the fighting was on the whole the kinder procedure. The pauperization of whole tribes—their degradation from braves to beggars—is the severest of the many indictments that can be brought against the nation for its treatment of the Indian.

But in extenuation it may be said that this treatment, too, had its beginnings before the United States began. From the first the European alternated between severity and cajolery; he would overawe the native by force or propitiate him with gifts and flattering promises. The first paragraph begins the tale of vacillation and indecision.

Adopted with the idea of bridging over the time until the Indian should become self-supporting on his own land, the rationing helped to postpone self-support for an indefinite period. Together with the annuity payments often made as a return for cessions of land, the Indian was enabled to live according to his low economic and social standards, without the need for labor. And he had not the belief in labor that distinguished the American of the middle generations, but, instead, the lofty contempt of the savage for effort that did not carry with it the nature of an exploit. One could boast long and loud of taking a scalp or felling a buffalo; but scarcely of severing the corn from its stalk or digging the potato. Work of this sort was for women.

Land Tenure as Factor Encouraging Indian Farming

So the business of making the Indian into a farmer did not progress rapidly. But it did go on, little by little, in many instances; and the feeling grew up among the whites who particularly interested themselves in the welfare of the red man that this transformation would come much more speedily if the land were owned by the Indians individually instead of as a tribal possession. Personal responsibility and personal rewards, it was felt, would bring about an ambition and an industry that communal ownership could not or did not stimulate.

In this, public opinion failed, as it so often does fail, to take into account the fact that the attitude toward land ownership which long centuries had bred into our race was still lacking in the Indian. Our heritage of attachment to the soil and to the private ownership of land has been fostered for so many generations that we forget that it is an inheritance from the ages, and regard it as a human instinct common to all men. The Indian has no such tradition behind him, and the instinct of private possession is lacking. At best his acquisition of such an attitude would be imitative of those about him, not sprung from his inner nature. A 25-year period of individual landholding was relied upon to take the place of what in our history was an evolution lasting many centuries.

By special law a number of reservations were divided into portions for the individuals of the tribe from time to time; but it was not until 1887 that the General Allotment Act provided for the

breaking up of all reservations, at such times as the judgment of the Executive should determine. In his report for 1878 the Commissioner of Indian Affairs had reviewed the land situation, and had made the following summary of the proposed remedy:

> As fast as the Indians are consolidated upon reservations, or in cases where they are now located on good agricultural lands where it is deemed best that they should remain, the Secretary of the Interior should be authorized by a law applicable to all the tribes to allot the lands in such reservations among the Indians belonging thereon, in tracts not exceeding 160 acres to the head of a family, or 80 acres to each single person over 21 years of age, and to issue patents therefor without the right to sell, mortgage, lease, or otherwise alienate the same for the term of 25 years from the date of the patent; said lands so patented to be exempt from taxation and from levy or sale under process of any court for a like term of years; all property acquired by the Indians, aside from the lands received from the government as above suggested, and the annuity or other tribal funds derived under any treaty with the government, to be subject in all respects to the laws of the state or territory in which the party may reside. . . .
>
> Such an act would, I am satisfied, afford to the Indians the degree of protection necessary to their civilization and lead them gradually to a full comprehension of the rights, privileges, duties, and responsibilities of American citizenship, which I shall hope to see accorded to them whenever in the future they become fully competent. A bill embracing the material points above indicated will be prepared for submission at the coming session of Congress.

It was nine years before the bill was finally passed, nine years which included much awakening of public interest in Indian matters. It was the time of *Ramona* and *A Century of Dishonor;* it was the decade which began the conferences at Lake Mohonk, where each autumn friends of the Indian met to discuss the problems of the race with the Board of Indian Commissioners. It was also the decade of the Meeker murder and the Geronimo raids. To some of the dwellers in the West, a good deal of perspective was needed to develop a belief in the perfectibility of Indian character.

Nevertheless, the adherents of the law were not entirely wrong in greeting it as "a great step in advance in Indian policy" and in suggesting that "the day when it was approved by the President may be called the Indian Emancipation Day." And these were the reasons given in the report of the Board of Indian Commissioners for such a eulogistic view:

> This measure gives to the Indian the possibility to become a man instead of remaining a "ward of the government." It affords to him the opportunity to make for himself and his family a home, and to live among his equals a manly and independent life. It offers to him the protection of law and all the rights and privileges and immunities of citizenship.
>
> It is plainly the ultimate purpose of the bill to abrogate the Indian tribal organization, to abolish the reservation system, and to place the Indians on an equal footing with other citizens of the country.
>
> We do not look for the immediate accomplishment of all this. The law is only the seed, whose germination and growth will be a slow process, and we must wait patiently for its mature fruit. There are difficulties and perplexing questions to be settled and conflicting interests to be adjusted. Some of these are to be found in the character and habits of the Indians themselves; while many are ready and have been waiting long for this beneficent measure, some non-progressive Indians are still opposed to it, and will throw obstacles in the way of its execution. They see their power and importance as tribal chiefs slipping away, and they have enough human nature to cling tenaciously to their prerogatives.

But this opposition from Indians who were reluctant to receive their lands in severalty was only one of many obstacles that stood in the way of the complete working of the allotment law as those

who favored it had anticipated. As Senator Dawes, whose name the enactment has always borne, pointed out, it was an opportunity rather than an accomplishment:

Today the law confers upon every Indian in this land a homestead of his own; and if he will take it, makes him a citizen of the United States, with all the privileges and immunities and rights of such a citizen, and opens to him the doors of all the courts of the land on the same terms that it opens them to any other citizen, imposing upon him the obligations and extending to him the protection of all the laws, civil and criminal, of the state or territory in which he resides. . . . What is this change? It is not any transformation of the Indian. The Indian remains today just what he was before, himself and nothing else. The law has only enacted an opportunity and nothing more, but that is a point I can hardly myself understand and comprehend, so far-reaching is it in connection with this question, so multiplying its phases, so summoning up of new questions and bringing up new difficulties in the path of him who tries to do something for the Indians.

Two hundred thousand Indians have been led out, as it were, to a new life, which is to them all a mystery; they do not know whither it leads or how to travel it. . . . What is the Indian? Blind, helpless, ignorant. Not one in a hundred speaks the language of the country. The responsibilities of citizenship you have put upon him, without his even knowing what you were doing. You all at once bid him stand forth among men, put him upon the same platform of opportunity, of responsibility, of aspirations, upon which you stand yourselves. The government has gone further; it has found him a homestead and citizenship and power in the land. The government leaves it there; the rest of the work is yours and mine.

Disposal of Surplus Lands

A necessary corollary of giving a certain portion of land to each individual of the tribe was the disposal of the lands remaining undivided. These surplus lands, the law provided, were to be sold for the benefit of the tribe, the money placed in the United States Treasury to its credit, to be disbursed upon authority of Congress for Indian support and civilization. A double benefit was to be derived from this. The proceeds from the sale were to give the Indian a start as a farmer, provide him with a house in place of a tepee or wickiup, furnish him tools for farming, material for fencing, and everything that would place him well on the road to self-support.

The second advantage that was to come to the Indian from this breaking up of the reservations was the coming of white neighbors, who, in taking up farms all about him, would stimulate him by their example and their standards of living. So civilization would come to the Indian.

In sections where allotments were made and surplus lands sold, both these conditions came about in a measure; but the results were frequently very different from those anticipated by the proponents of the Dawes Act. The surplus lands, where at all desirable, were speedily taken up; the influx of white settlers began as soon as permitted. This brought along with it the schools, the towns, the general advantages of the white man's way of living, which it was hoped would hasten the development of the Indian into those same ways.

The Rigidity of Indian Customs

But all history tells us that the changing of standards of living must be a slow and gradual process. The Indian learns only little by little to prefer a house to a tepee, a stove to a fire of sticks in the open, a clean bed to a pile of insanitary skins and rugs. And only little by little does he learn the desirability of labor, the rich promise of fields and flocks.

So the Indian farm or allotment would stand uncultivated while the less desirable plot beside it, which the Indian had not chosen but had left open for sale to the whites, was quickly occupied and put under cultivation. It is true that the Indian might see from this development of the less choice portions of his country the possibilities lying in the richer lands. It is also true that the white man, too, was quick to see the possibilities of the better fields, and to offer to add to his own acres by leasing those of his Indian neighbor.

Leasing Indian Allotments

This leasing was done by the officers of the government, for though an allottee and a citizen, the Indian was not yet owner of the complete title to his land, which was held in trust, according to the law, for a period of 25 years. In the main, the government procured a fair price for the land and took care of the money, disbursing it to the Indian with all care and diligence. In this phase of administration there seemed little to criticize; presumably all was done in the best interests of the red man.

But lease moneys, and annuity moneys, and the various aids and benefits to be had without an effort, too often sufficed for the Indian's wants, rather than spurring him on to higher attainments. His needs were simple; and in many cases were more than met by these easy gratuities. The development of higher wants did not follow as it might have done in the case of the white man. Again we were trying to read Anglo-Saxon characteristics into the Indian, and again failed to find them. The Indian remains an Indian still. The making of the hunter into a tiller of the soil proved a slower process than his friends expected.

Difficulties of Allotment Policy

The process was complicated by the frequent change of purpose which seems to have attended Indian matters at every stage. The Commissioner of Indian Affairs, in his report for 1900, summed up some of the difficulties in vigorous fashion. At this time some 60,000 allotments had been made all over the country—"on paper at least," was Commissioner Jones' comment:

The true idea of allotment is to have the Indian select, or to select for him, what may be called his homestead, land upon which by ordinary industry he can make a living either by tilling the soil or in pastoral pursuits. The essentials for success are water and fuel, but above all the former, for fuel can, if necessary, be procured and brought from a distance. To put him on an allotment without water and tell him to make his living is mere mockery. His allotment having been selected, he should be required to occupy and work it himself. In this he must have aid and instruction. If he has no capital to begin on, it must be given him; a house must be built, a supply of water must be assured and the necessities of life furnished, at least until he can get a start and his labor become productive. The better to assist them, the allottees should be divided into small communities, each to be put in charge of persons who by precept and example would teach them how to work and how to live.

This is the theory. The practice is very different. The Indian is allotted and then allowed to turn over his land to the whites and go on his aimless way. This pernicious practice is the direct growth of vicious legislation. The first law on the subject was passed in 1891, when Congress enacted that whenever it should appear that by reason of age or other disability any allottee could not personally and with benefit to himself occupy or improve his allotment or any part thereof, it might be leased under such regulations as the Secretary of the Interior should prescribe for a period not exceeding three years for farming or grazing, or ten years for mining purposes. In 1894 the word "inability" was inserted, and the law made to read "by reason of age, disability, or inability." The period of the lease was also fixed at five years for farming or grazing and

ten years for mining or business purposes. This remained unchanged until 1897, when "inability" was dropped out, age or disability alone made a sufficient reason for leasing, and the periods changed to three and five years, respectively. This law was operative until the current year (1900) when it was again changed, "inability" restored, and leases limited to five years, for farming purposes only.

It is conceded that where an Indian allottee is incapacitated by physical debility or decrepitude of age from occupying and working his allotment, it is proper to permit him to lease it, and it was to meet such cases as this that the law referred to was made. Had leases been confined to such cases there would be little, if any, room for criticism. But "inability" has opened the door for leasing in general, until on some of the reservations leasing is the rule and not the exception, while on others the practice is growing.

To the thoughtful mind it is apparent that the effect of the general leasing of allotments is bad. Like the gratuitous issue of rations and the periodical distribution of money, it fosters indolence with its train of attendant vices. By taking away the incentive to labor, it defeats the very object for which the allotment system was devised, which was, by giving the Indian something tangible that he could call his own, to incite him to personal effort in his own behalf.

The leasing law of 1900, of which Commissioner Jones speaks, is in force today; and the act of June 25, 1910, broadens its provisions by permitting the leasing of "any Indian allotment held under a trust patent." The disadvantages of leasing, apparent in 1900, are no less apparent today. In many a section of the country one may travel through these "open reservations" and know at a glance which farms are still in Indian hands and which are being operated by white owners or lessees. Even if the Indian landlord, on the few acres which may have been withheld from leasing for a home site, has a house which is fully the equal—to say the least—of the dwelling of his white tenant, still the difference is obvious. For the farmer will have planted trees about his house; there will be cows at pasture and chickens in the barnyard. The Indian proprietor does not look ahead to the slow maturity of a tree; and he resents the daily attention needed by live stock. Such attention interferes with the frequent extended visiting, the weeks of absence for dance or fair or other merrymaking, so dear to the Indian heart.

This rule is by no means universal; there are many Indian homes with trees and gardens, where chickens and cows receive regular care. There are fair fields and rich crops that testify to the goodly distance the red man has traveled on "the white man's road." That he should travel in that direction at all, in view of the many inducements to idleness and indifference, is worthy of remark.

Land Policy, Citizenship, and Liquor Regulation

Some of the attendant circumstances of his new status awakened a keener interest in the Indian than did the right to plow and reap. As a citizen, the fact that the courts were open to him seemed less immediate than the fact that the saloons were. His desire for litigation was less pressing than his desire for whisky.

From the days when a council with the trader and his party ended in a distribution of kegs of liquor and a frantic spree with its consequent fights and murders, the Indian had both sought and feared the fire-water of the white man. The question of intoxicating liquors had been inextricably bound up with his land from the very beginning. One after another the treaties would stipulate that so long as grass should grow and water run, no liquor should be brought into

"Indian country." It was a policy upon whose wisdom every one was agreed. It was equally a policy which nearly every one conspired to violate.

Neither the Indian nor the purveyor of intoxicating liquors was slow to take advantage of the new condition of affairs. It was a matter of years, however, before the question reached a final adjudication in the Supreme Court. The Heff case[4], decided April 10, 1905, granted a writ of habeas corpus in favor of one Albert Heff, who had been convicted in the lower courts of selling liquor in the town of Horton, Kansas, to an allotted Indian. Inasmuch as the Indian had been declared a citizen and was not within the borders of Indian country at the time of the sale, it was held that he was within his rights in buying, and the defendant in selling, the liquor.

"We are of the opinion," the decision held, "that when the United States grants the privileges of citizenship to an Indian, gives him the benefit of, and requires him to be subject to, the laws, both civil and criminal, of the state, it places him outside the reach of police regulations on the part of Congress; that the emancipation from federal control thus created cannot be set aside at the instance of the government without the consent of the individual Indian and the state, and that this emancipation from federal control is not affected by the fact that the lands it has granted to the Indian are granted subject to a condition against alienation and encumbrance, or the further fact that it guarantees to him an interest in tribal or other property."[5]

At the same time, an opinion of the Attorney General commented on the fact that this decision had no reference to the sale of liquor upon a reservation or upon an individual allotment still held in trust; that while the individual Indian was free to purchase liquor as any white citizen might, yet the laws forbidding the introduction of intoxicating liquors into "Indian country" still applied to his allotment.

The Burke Act of 1906

This decision was a large factor in leading to the passage, in 1906, of the Burke Act, which modified the provisions of the General Allotment Act of 1887 in a number of important particulars; the foremost modification was the provision that the Indian holding an allotment under a trust patent should not become a citizen of the United States until the quarter-century of the trust period should expire, and he should receive a patent in fee to his land.

This decision, of course, could not affect the 70,000 or more Indians who had already received their trust patents under the Act of 1887. They were in all parts of the country, on reservations scattered far and wide. Their citizenship, once granted, could not be withdrawn; but even for them the act served to tighten the reins of official supervision, to confirm the authority of the government to keep liquor away from their lands and from their persons while they remained on their lands. It served, also, to preserve in a measure the character of a "reservation" even after the allotment of land in severalty.

Conditions of Land Ownership in Fee Simple

As an offset to this tightening of the lines, a way was provided by the act for complete freedom from supervision for Indians by the issuance of patents in fee

[4] *Matter of Heff,* 197 U. S. 488 (1904).
[5] 197 U. S. 488 at 509.

to their land, whenever the Secretary of the Interior should be satisfied of the competency of the allottee to manage his own affairs. Before that time, special legislation had been necessary before an Indian could be freed of the trust resting upon his land; now under regulations prescribed by the Secretary, he could make application for a patent in fee, and would receive it upon satisfying the Department of his alibity to handle the property for himself.

The Commissioner of Indian Affairs at this time, Francis Leupp, commented on this feature as a very important one, "if not the most important relating to Indians that has been vested in the Department; and logically correct and in harmony with the spirit of the body of the law." With respect to the application of this power to issue patents in fee, he recommended that the ability of the Indian to make his own way in the world by industry should be the determining consideration in releasing him from governmental restrictions. In short, he said:

> I would make industry the primary test and use this as a lever to force Indians to earn their bread by labor. There is no danger of proceeding too slowly; the spirit of the times will not permit any stagnation. The legislation of recent years shows conclusively that the country is demanding an end of the Indian question, and it is right. The Burke law, wisely administered, will accomplish more in this direction than any other single factor developed in a generation of progress. When it is supplemented by other legislation which will enable their *pro rata* shares of the tribal moneys to be paid, principal and interest, to competent Indians, the beginning of the end will be at hand. Such Indians, owning their land in fee, and receiving their portions of the tribal property without restriction, cannot by any course of action maintain a claim for further consideration. Through such measures the grand total of the nation's wards will be diminished daily and at a growing ratio.

Remnants of Tribal Property

Between that day and this—nearly a score of years—there has undoubtedly been a great diminution in the "grand total of the nation's wards." But legislation permitting the complete division of tribal property has not yet been enacted, so that in many cases it is true that perfectly competent men and women of greater or less degree of Indian blood, quite able to handle their own business affairs, possessors of the fee simple title to their lands, are still under the supervision of the Federal Government with respect to tribal moneys and annuities, and are carried on the tribal rolls for the receipt of such funds. Again and again has the question of making a distribution of tribal property such as to release thoroughly competent people from supervision been broached; but again and again the technical difficulties in the way of such divisions, and the realization of the abuses that have always followed any letting down of the bars in Indian matters, have stayed the hand of the legislators.

Sales of Indian Lands

The authorization of patents in fee for competent Indians was designed for the purpose of freeing educated and industrious Indians from "wardship." In general, however, the freedom from restrictions was valued because it made possible the sale of the land. An application for a patent in fee was a necessary preliminary to sale. When this was allowed to happen another failure was scored up against the plan to make the Indian a farmer.

An act of the following year (1907) authorized the sale of the lands of an incompetent Indian for his benefit, in

the discretion of the Secretary of the Interior; and this applied both to the lands originally allotted to an Indian and to those which he might inherit through the death of other allottees of his family. In 1908 restrictions upon the lands of the members of the Five Civilized Tribes were cut to the minimum; freedmen, intermarried whites, and all having less than one-half Indian blood, were free to sell all their lands; mixed-blood Indians having one-half or more, but less than three-quarters Indian blood, might dispose as they pleased of all but a homestead allotment. Similar laws were made from time to time for some other tribes.

The situation at the White Earth reservation in Minnesota is an illustration of the abuses that could arise wherever ignorant allottees were in possession of the natural wealth so coveted by the white man. The White Earth story is a flagrant example, it is true, but the conditions discovered there are in their essence typical of the situation everywhere.

An act passed in 1905 removed all restrictions from the lands of adult mixed-blood Indians, declaring that the trust deeds passed the title to the allottees in fee simple. The timber upon these allotments made the land especially tempting. Commissioner of Indian Affairs Valentine described in his report for 1910 the situation that was brought to light by investigators: "The allottees began to sell their land as soon as the act was passed. The cupidity of the white purchasers led to flagrant violations of the law. They purchased lands of Indians who were unquestionably full-bloods and plainly not competent to sell their lands under the law. Trickery and fraud of all kinds were resorted to, and finally about 95% of the allotments, or the timber on the allotments, of White Earth allottees had been disposed of under the pretended authority of the law. Millions of dollars were involved in these illegal sales."

To correct these evils as far as possible, suits were instituted to restore the lands in the case of fraudulent sales, and a new roll of the Chippewa of White Earth made, to show the degree of Indian blood as accurately as might be. But it was all a vexed question, and the results, while beneficial in the main, were not so far-reaching as was desired. The confusion of Indian family relationships and the vagueness of Indian testimony proved a serious hindrance to the work.

Such occurrences as these illustrated the fact that by this time should have been apparent to every one; that to the Indian a bird in the hand is worth many in the bush. Long foresight and thrift are not his inheritance; and the environment with which he has been surrounded has not tended to develop those characteristics. Even under the most favorable conditions, a quarter-century of good example could not change an ancestral attitude completely. He is not yet in the stage of development in which he can willingly forego present indulgences for the sake of future benefit. Even the farmer's forward look from the sowing in the spring to the harvesting in the autumn is a long way for the primitive mind.

Results of Allotment Policy

At the present time, about 200,000 Indians have received allotments of land in varying quantity, determined by the nature of the soil, the size of the tribe in comparison with its acreage, and various other factors. The average is approximately 200 acres per allotment, but the large assignments of land in

non-irrigated regions, where pasturage is the only feasible use, raises this average. In farming sections the allotments have more commonly been 160 acres.

Of the Five Civilized Tribes, four-fifths of the allottees have received their lands in fee simple and are no longer under the jurisdiction of the Federal Government. Outside of the Five Tribes, there are perhaps 30,000 Indians who, by the issuance of patents in fee, have been given the right to dispose of their lands as they might wish. The number thus shaking off the condition of wardship is constantly increasing.

It is not, however, increasing so rapidly as might be expected in view of the fact that the General Allotment Act was passed 36 years ago, and that upon the great body of allotments made in the 1890's the trust period should by this time have expired, leaving the allottees free to do as they please with the land. The quarter-century which was counted upon as a growing period for the Indian's sense of responsibility and readiness to meet the world has proved too short a space, the verdict has frequently been; and again and again, as the trust period would near its end, Congress has been called upon to extend the time of tutelage, for 10, for 20, or for 25 years longer. And though the year 1917 saw a "declaration of policy" on the part of the Indian Office looking toward the setting free from restrictions of all Indians who might be considered competent, yet the danger of freeing whole tribes through the expiration of their trust period became increasingly evident, and the years following have seen many extensions of the trusts.

Persistence of Tribal Customs

The theory that the issuance of a patent in fee removed the Indian from supervision has not gone without modification. Even apart from the tribal funds, if such exist, in which he would still retain a share, there is a strongly marked trait of Indian character with which the theory does not reckon. The communal feeling and habit have by no means died out in the race, and the Indian who has taken his fee patent, sold his land, and squandered the proceeds, is still a member of his tribe and a sharer in their welfare, not only officially by way of annuities, but individually by way of the visiting that makes up so large a feature of Indian life.

The white man who has lost all his property instinctively looks for some employment. The Indian in like case simply moves his family into the home of another Indian, and shares his house or his tepee in perfect assurance of his welcome there so long as provisions hold out, and even beyond. "Take no thought for the morrow" is the commandment especially dear to the Indian heart. So the Indian who has gone through all his property is not so nearly destitute, not so ready to turn to the last dreaded expedient of labor, as we might expect. He must wear out his welcome with his friends and fellow tribesmen before he is really driven to toil.

In the sections where allotment took place early—and there was a great activity in allotting 30 to 35 years ago—there is growing up, or has already grown up, a generation without land, because it is a generation born after the distribution of land was made. Young men from 20 to 30 years of age, schooled and trained in labor, the very ones who might be expected to bring about a realization of our farmer ideal for the Indian, are the very ones who have no land on which to carry out the ideal. Young women of 20 to 30, schooled and trained in the duties of the

home, the very ones who might be expected to bring about a realization of our ideal of an improved home standard for the Indian, are the very ones who have no homes in which to practice the arts they have learned. Thus the generation that should be leading is drifting instead. In some instances, of course, these younger men and women have lands by inheritance. But the chances of life do not deal out inheritances equally, however evenly the lands may have been divided at the outset; nor is it a reasonable expectation that one will become an orphan in the twenties. The life of drifting will have had its effect before the young Indian becomes a landowner; he will have learned the easier way, and such ambition to work as he may have gained from contact with white standards will be dissipated before the opportunity to gratify it appears.

Present Status of Indian Land Tenure

So far as land ownership goes, we find Indians in so many different situations that this aspect of the Indian problem has an almost bewildering complexity. They fall into several distinct classes, which it is worth while to summarize:

1. There are the "landless" Indians. These are to be found principally in California and in the farther West. These are Indians with whom no treaty relations have existed and for whom no provision has been made. They have, not infrequently, attained from this neglect an independence and an industry which make them in their extreme poverty more productive members of society than their wealthier fellows. They are to be found in the ranks of casual labor, or as "squatters" upon lands to which they hold no title. During the past dozen years locations have been found for many of these.

2. There are the Indians still living in tribal relations and upon reservations which have never been parcelled out to them as individuals. The reservations may have been established by treaty or by Executive order, or by a combination of the two. The Indians may be nomads over the face of their lands, as are the Navaho or the Utes of Ute Mountain; they may have little or large portions of land assigned to individuals by the consent of the tribe, as with the Pueblos or the New York Indians; but they have not the patents which show an individual allotment of land authorized by Congress and made under the direction of the Secretary of the Interior. Some of the tribes in such cases are merely awaiting a delayed allotment; others have land of such a nature, but communal or nomadic habits are so strong that the time for individual allotment is manifestly not yet at hand. In wealth, too, they present every extreme; some tribes being without funds, others having huge deposits in the Treasury as the result of mining or logging or the like.

3. There are the Indian allottees, still holding lands under trust patents, where the reservations have been broken up into allotments. If their allotments were made between 1887 and 1906, they became citizens of the United States when they received their allotments. If they received their land since the passage of the Burke Act, they did not become citizens until 1924, when Congress extended citizenship to all native-born Indians. Their reservations may be closed—by which term is meant that the surplus lands have not yet been offered for sale and opened to settlement by the white man. The Crow reservation is an example of this. Or the reservation character of the land may have been all but destroyed by the opening to white settlement. Such are

most of the Oklahoma lands, a large share of the vast Dakota reservations, and many others that might be instanced. And so far as the use of his land goes, we may find the Indian actually living upon it and producing crops, or he may be living upon lease moneys collected from the white tenant by the officers of the government.

4. There are the non-allotted Indians upon these same open or closed reservations. These are the younger members of the tribes—"newborns," as the Cherokees call them. Where allotment began early, these "newborns" may be mature men and women; where it was late, it may be only the infants of the tribe who have been left out in the division of the soil. Except in the case of a few tribes allotted by special enactment prior to the passage of the General Allotment Act, none of these unallotted members of allotted tribes should be more than 35 years of age. As time goes on it will be increasingly true that the active generations of the tribes are the landless Indians, save as portions left unsold at the death of the older members may come to them by inheritance. These landless Indians share in the tribal funds none the less for their inability to share in the lands; they are upon the tribal rolls, and when land descends to them, it has the same type of restrictions as if it were passing into the hands of an allottee. However, these restrictions are not so rigid as in the case of the original allotments; the privilege of selling inherited lands has always been easily granted in comparison with the sale of allotted land, and the land that does come to these unallotted men and women tends to slip from their hands very easily. In the case of the children who inherit lands, the tendency is for such holdings to be sold at the solicitation of those having the child in charge, for support and maintenance during the early years.

5. Finally, we come to the Indians who by reason of the expiration of the trust period, or by virtue of the decisions of a competency commission, have received patents in fee to their land. Not all of these are as completely free of governmental supervision as was intended by the framers of allotment acts, for other tribal property and funds may exist in which they may claim a share. So the tribal rolls not infrequently contain the names of Indians whose lands are no longer restricted. Only when the tribal affairs have been completely wound up, the rolls closed, the last payments made, may the patent-in-fee Indian be said to be completely released from the supervision of the government.

The first fruit of the patent in fee to the land is the obligation to pay taxes, from which the allotment has been free throughout the trust period. But all too often the Indian in receipt of a patent in fee never comes into contact with the tax-gathering arm of the state. He does not stay in possession of his land long enough for a tax schedule to be made out or an assessor to visit him. There is always the white man ready to purchase, and the attractions of the bird in hand prove too tempting to resist.

Results of Policy of Making Indian Farm Owner-Operators

So we swing around the circle and come again to the landless Indian. Against the policy of keeping the Indian on a farm, time and nature have worked vigorously. Bestowing land upon the generation of the 90's has not in most instances reserved it for the generation of the 1920's. Nor has it fulfilled the rosy hopes of a generation ago, that by this time the tribal entity

would be dissolved. Old ways, old ties, are still strong.

Some of the obstacles in the way of making every Indian a farmer have been sketched in this article. Some are in the character of the Indian himself, as he emerges from the plains or the hills to the lands assigned to him—his disdain of labor and his utter lack of regularity and foresight. Others are found in his tribal organization with its tendencies all toward a sharing of goods rather than the growth of individual enterprise and ambition. Others lie in the character of the land assigned him, which might be, as with the Jicarilla Apache, too high and too rugged, too poor for farming, or, as with the Osage, too rich below the surface to be left for agriculture. Other hindrances came from the white man's ever-present hunger for land; whether he bought it fairly or sought it by chicanery, his was the dominating desire, and bound to prevail in the end. Other difficulties arose from the too easy gifts of the government—rations, annuity moneys, and all the things that help to deaden ambition. And still other troubles came from an indecisive policy that alternately gave and withheld, that changed with the winds of changing administrations.

In spite of all these things, the feeling that the Indian should become a farmer persisted and this feeling prevails today. It is at the bottom of nine-tenths of the policies put forth as a solution of the Indian problem. It is a sentiment that must be reckoned with whenever Indian affairs are to be adjusted.

But awakening the Indian mind to an appreciation of the Anglo-Saxon theory of land tenure and his heart to a sympathy with the Anglo-Saxon love of the soil is no process of a day. It has taken the white man many centuries to develop. He cannot expect the Indian to acquire it overnight.

MOTOR TRANSPORT AND OUR RADIAL FRONTIER

By JOHN C. LONG

ONE of the most puzzling economic phenomena in America during the past quarter-century has been the rise of the automobile industry. In 1900 there were 8,000 motor vehicles in the United States; today there are 18,000,000. Behind these cold figures lies an industrial story of far-reaching economic and social import. The growth of motor travel has defied the statisticians. It has gone way beyond the predictions even of those who were in the automobile manufacturing business. Fifteen years ago the proposed production of one million cars and trucks in a year was regarded by the industry as staggering and alarming. But the annual output total now is around four million units.

Why has the American public bought the automobile in such quantities? How has the public purse been able to sustain a motor transport expenditure which now amounts to about eight billion dollars annually? Is this large investment in motor vehicles causing extensive readjustments in the economic picture, in land utilization, for example; and what effect is it having on living conditions? What are the future markets for the automobile?

These are queries which the situation naturally provokes. Satisfactory answers, moreover, depend upon a careful examination of the causes, the extent, and the effects of the automobile business, with a view to reaching as far as possible an understanding of the social and economic significance of motor transport.

I. Growth of Motor Transport

Most subjects, although complicated in detail, are based upon one or a few simple principles. Professor Frederick J. Turner, in his book, *The Frontier in American History,* has traced the development of America as it has resulted from the pressure of population westward. His theme is helpful toward an understanding of the growth of the automobile industry. For here, again, is a development depending upon the frontier, although this time the movement is radial rather than a pushing ahead in one direction.

Impressed by the rapidity with which the American nation moved toward and built up the West, we have been inclined to think of that phenomenon as a wide wave of progress. It might better be considered, however, as a series of rivers rather than a broad, complete flow.

What happened, in short, was that along certain wagon trails, canals, and railways, the pioneer pushed westward and took the country, but in between these gridiron lines of communication vast territories remained undeveloped.

Land Reclaimed by the Automobile

Shortly after the railways had reached the peak of their development in this country, the automobile appeared on the horizon, offering a new form of transport. Confined neither to rails nor to water, it could operate wherever there was a highway, a road, or even a clearing. Let us imagine a tract of land 40

miles square, bounded on each side by either railways or river. Before the coming of the automobile, the bulk of the population would normally be within a few miles of the lines of transport. Today any part of the square is socially and economically usable because of the automobile; it is within an hour's ride of the main lines of communication.

It is this situation which has made the tremendous growth of the automobile economically possible. It must not be forgotten, too, that the automobile furnishes rail-less transportation. Large amounts of capital are needed by steam railways to prepare road-beds and lay rails before operations can begin. The capital needed to make a usable motor roadway for the same distance is a smaller amount. This is but one factor, but it is an important element in bringing the motor vehicle within reach of the families in the less prosperous rural regions. The steam railways could not afford to extend lines into sparsely settled territory, and the settlers in such regions could not afford to subsidize a railway extension. Transport was therefore at a minimum in regions not directly served by railways until the development of the motor vehicle brought an alternative within the scope of those with limited means. Then the one-direction frontier gave way to the radial frontier in extending land utilization.

Likewise, the structure of cities has been radically changed by the development of motor transport in much the same way that the regional structure was changed. A radial extension of the city frontier has tended to characterize urban growth.

In 10 years the counties of Long Island suburban to New York City have increased their population from 180,068 to 236,361. Ten years ago most of the land in this area which was within walking or horse-driving distance of the railway stations was already occupied. Today homes are being built up along routes that are 10 miles and more from the railway station.

The following tables, giving the urban and suburban population of our largest cities, indicate that in most cases not only have the outlying districts had a very large growth in the decade from 1910 to 1920, but that the percentage of suburban population in the whole metropolitan district has in general been on the increase.

A recent study of urban growth based on Census figures for metropolitan districts shows that the population

TABLE I. PERCENTAGE OF SUBURBAN POPULATION IN TYPICAL METROPOLITAN DISTRICTS, 1910-1920*

Metropolitan Area of	1910 City Proper	1910 Suburban District	1910 Percentage of Population in Suburbs	1920 City Proper	1920 Suburban District	1920 Percentage of Population in Suburbs
Baltimore†	558,485†	105,325†	16%†	733,826†	53,632†	7%†
Boston	670,585	860,553	55%	748,040	1,024,194	58%
Chicago	2,185,283	270,659	11%	2,701,705	477,219	15%
Detroit	465,766	48,320	9%	993,678	171,475	15%
New York	4,766,833	1,799,976	27%	5,620,048	2,290,367	29%
Philadelphia	1,549,008	434,298	22%	1,823,779	583,453	27%
Pittsburgh	533,905	499,147	48%	588,343	619,161	51%
St. Louis	687,029	141,074	17%	722,897	179,115	18%
San Francisco and Oakland	567,086	119,787	17%	723,937	168,540	19%

*Figures from *World's Almanac*.

†Changes made in extent of Baltimore's city limits invalidate any comparison.

TABLE II. AVERAGE ANNUAL EXPENDITURES FOR CERTAIN ITEMS OF ADVANCEMENT IN 402 FARM FAMILIES IN LIVINGSTON COUNTY, NEW YORK*

Items of Advancement	Owner Families (295)		Tenant Families (107)		All Families (402)	
	Amount	Proportion of Total	Amount	Proportion of Total	Amount	Proportion of Total
	Dollars	Percentage	Dollars	Percentage	Dollars	Percentage
Formal education	39	2.0	29	1.4	36	1.8
Reading matter	14	.7	13	.6	14	.7
Contributions to church organizations	45	2.3	28	1.3	40	2.0
Entertainments	11	.5	16	.8	13	.6
Cost of operating and repairing automobile	64	3.2	67	3.2	65	3.2
Other travel	13	.6	11	.5	12	.6

*This study was made in 1919.

"Among the items of advancement especially tabulated, the largest is the cost of operating and repairing the automobile. This averages $65 a year, or 3.2% of all expenditures. Cars were owned by 304, or 75.6%, of the 402 families, and the annual expense per car was $86. Automobiles are among the farm facilities listed by the United States Census of 1920 and are reported for 35.2% for all farms in New York state and throughout the Middle-Atlantic division. The percentage for Nebraska exactly equals that for the Livingston county farms, and Iowa is not far behind with 73.1%. These states are far above the average of 30.7% for the United States."

increase of the central cities from 1910 to 1920 was 25% in comparison with the 33% increase in the outlying suburban areas.[1] This phenomenon seems best explained by the ever-wider use of motor transport. We may anticipate that the next Census figures probably will reveal unmistakably the predominance of suburban growth.

The Automobile on Farm Lands

Another phase of the radial frontier is that of the use of the automobile in social and economic progress on the farm. This is a subject with many ramifications. Attempts are being made to determine to what degree the increase in farm land values may be accounted for by the improved transport made available by the modern highway and the automobile. This is a matter difficult, and perhaps impossible, of accurate determination, but obviously land that was formerly within several hours' ride of mainline transport and the city acquires greater utility when the several hours are reduced to one, by more rapid transport. It is recognized that these benefits of increase in value may not always accrue to the farmer and may also be offset by burdens of taxation and financing; but the fact remains that through the cutting down of time, a value has been added to society's resources.

It is hoped that university research, in the next few years, will devise methods for getting more complete information about the costs of, and the increments from, motor transport in developing farming and farm lands. The United States Department of Agriculture is engaged upon a number of studies related to this subject. Among these is found Table II[2], which is in point.

The motor car is used by the farmer not alone for transport to school, church, and to the city for household supplies, but likewise as a general utility vehicle. Every survey undertaken in

[1] Rosalind Tough, "Urban Growth in the United States," *The Journal of Land & Public Utility Economics*, April, 1925, pp. 226-236.

[2] *Family Living in Farm Homes*, United States Department of Agriculture Bulletin, Number 1214, p. 16.

the rural field brings light on the variety of ways in which the farmer is utilizing motor transport. For instance, here are some communications to the *Farm Journal:* "Can save $200 per year delivering milk"; "Made several quick trips on real estate deals—cleared $300"; "Sold 600 baskets of apples in one day. One day later could not have sold them at any price"; "Got 75 cents more per bushel for 400 bushels of early potatoes"; "Carry cream to creamery, 15 miles, get better price and no express charges."

The fact that in some cities practically the entire milk supply is carried by motor truck from the farm to the distributing plants only serves to reenforce the point.[3]

It is apparent, therefore, that the advent of speedy, more flexible transport has added materially to our national productivity through the reduction of time in travel, that it has made land more readily available, and has altered the structural growth of both city and country along the frontiers.

The Human Factor

There is another aspect of the situation, however, which also serves to account for the rise of this industry. That is the significance attached by an individual owner to the possession of a car. This is an intangible, but, nevertheless, a real factor.

The desire for an increased standard of living is wholly natural, and to a great extent ownership of an automobile is regarded as a yardstick of the scale of living. This inducement has led many families to save greater amounts and to increase their efforts toward earning. At the same time, it should be recognized that many persons have scrimped on other expenditures in order to buy and maintain a car. Taken all in all, is it too much to say that the prospect or reality of automobile ownership has prompted many people to work harder and perhaps more productively?

In referring to this human factor I mean not merely the pride of ownership, but also, and particularly, the sense of freedom that accompanies ownership. The writer believes that here is a psychological element of social importance which is also the chief reason for the wide-spread acceptance of the motor car by the American public.

We come of independent pioneering stock. Our forefathers were impatient of restraint and adventurous in spirit or they would not have taken the chance of a long trip to a new world. Industrialization and standardization in America have progressed rapidly. They have their values, but they are prison bars to one phase of the American temperament. The automobile furnishes a release. It makes the individual the overlord of his own transport system; he can go where he wants, at such times as he desires. He can see new parts of the country. In a two weeks' vacation, he can cover 2,000 miles of territory if he wishes.

The social possibilities of this privilege to the man of limited means who previously was tied to a short radius from his own home town are overwhelmingly attractive. The result is that the desire for a motor car is a compelling urge in the average American home. To some degree, as I have said, the purchase of the automobile may be immediately at the expense of some other products, but how generally this is true in the long run is open to debate. The family automobile is frequently

[3] *Yearbook*, United States Department of Agriculture, 1924, p. 170.

TABLE III. INVESTMENT IN MOTOR VEHICLES, BANKS, LIFE INSURANCE, AND BUILDING AND LOAN ASSOCIATIONS, 1913-1923*

Year	Total Deposits in All Banks	Savings Bank Deposits	Building and Loan Association Assets	Life Insurance in Force, Ordinary and Industrial	Wholesale Value of Motor Vehicle Production
1913	$17,475,764,134	$4,726,472,768	$1,137,600,648	$20,520,598,372	$ 425,000,000
1914	18,517,732,879	4,936,591,849	1,248,479,139	21,565,652,328	458,957,843
1915	19,225,766,874	4,997,706,013	1,357,707,900	22,743,336,831	691,778,950
1916	22,877,607,339	5,088,587,295	1,484,205,875	24,636,030,335	954,969,353
1917	26,289,708,159	5,418,022,275	1,598,628,136	27,116,690,770	1,274,488,449
1918	27,931,843,777	5,471,579,949	1,769,142,175	29,797,068,355	1,236,106,917
1919	32,703,114,000	5,902,577,000	1,898,344,346	35,514,553,927	1,885,112,546
1920	37,683,563,000	6,536,596,000	2,126,620,390	42,330,968,000	2,232,927,628
1921	35,459,155,000	6,018,166,000	2,519,914,971	45,983,400,333	1,260,000,000
1922	37,194,318,000	7,181,248,000	2,890,764,621	50,290,700,176	1,789,638,365
1923	40,034,195,000	7,897,909,000	3,342,530,953	56,000,000,000	2,004,952,716

*From *Facts and Figures of the Automobile Industry*, National Automobile Chamber of Commerce.

paid for by living farther out in the country at lower rents or by other economies. Frequently, also, it is paid for by more intensive activity on the part of the bread-winner and perhaps on the part of other members of the family.

We cannot, of course, tell what might have been if motor transport had not been developed as it has been today, but it is worth while to note from Table III that savings bank deposits, building and loan assets, and other indexes of savings funds increased during the years of biggest development in the automobile industry.

The question may be raised, of course, whether or not these savings and investments would have been larger had there been no automobile development. On the other hand, would they have been as great? No one can state definitely, but generally it is assumed that railway transport has been a producer of our country's wealth. A considerable portion of the investment in motor transport may also be regarded as creative in its effect. A part of the money so spent is non-productive, but how largely this is the case it is difficult to determine. The rise of the automobile, moreover, has been due not alone to its wealth-producing possibilities or to the individual desire for it, but also because cars have been produced at favorable prices compared with many other major products.

As we look at the situation today, the price factor, the growth of the highways, and the interrelationship of the automobile with other transport agencies are the three chief elements in the present status of motor transport.

Below Pre-War Prices

In so far as other industries may have suffered from the market for automobiles, they have been facing a price competition fully as much as a desire competition. During the past 10 years the automobile industry has been developing production methods to an extent which has made it possible to sell the automobile at a price considerably under the level of charges in 1913. The traveling assembly line is one production feature which has lowered costs. Another item is to be found in the stamping-out of metal. One factory, for instance, cuts out the radiator shell, hub caps, and several other items at one time, all from one sheet, so that every piece of metal is utilized. Car bodies are put together by use of power screw-drivers.

The result of this and the volume demand is that the purchasing power of

the 1913 automobile dollar is $1.14 today. At the same time, the general 1913 cost-of-living dollar purchases but 60 cents today; the 1913 dollar in clothing, but 58 cents; in shoes, 60 cents; in furniture, 47 cents; in frame buildings, 51 cents; in brick buildings, 51 cents.

The price of an automobile, then, is not only actually less than it was before the war, but compared with the prices of other commodities it is relatively even more reasonable than the price tag would indicate. For instance, the farmer in 1913 needed to sell 1,482 bushels of wheat at the then prevailing market prices to buy an automobile at the average price as compared with a cost of 506 bushels today. In 1913 he needed to sell 2,321 bushels of corn as compared with 732 now. In 1913 he would have to take 17,047 pounds of hogs to market, whereas only 8,806 are required now.

It is probable, then, that there has been a certain amount of automobile buying above what would have prevailed if the prices of other commodities had been lowered in the same proportion as those of motor vehicles. Apparently the market demand not only arises from the economic usefulness and the desire-satisfaction of the automobile, but also has been further stimulated by a favorable price situation.

II. Problems Involved in Growth of Motor Transport

This necessarily brief account of the growth of the automobile industry inevitably brings to mind some of the outstanding problems implicit in this development. In an age of remarkable mechanical achievements, we too often lose sight of the economic and social difficulties that come in their wake. Yet these difficulties must be faced frankly and open-mindedly if mechanical progress is to serve social ends.

Farm Land Problems

I have already commented upon the radial extension of the frontier that may be attributed to the automobile. This, in itself, necessitates changes in the uses to which land is put. To take only one illustration, the markets for agricultural produce have been made more accessible in point of time and expense. As a result, farm land near urban centers which formerly could be profitably used extensively in grain crops is now better adapted frequently to the intensive cultivation of garden truck. Dairying also has become economically possible at greater distances from the city consumers. Partly as cause and partly as result, values of farm land near cities have tended to rise, with a consequent increase in taxes. The problems of the individual farmer have thus been multiplied.

These and many other changes make more imperative a program for scientific land planning, in order to get the maximum net benefit from our resources.

Urban Land Problems

In cities, too, problems of land planning have been made more acute by the growth of automobile traffic. Streets that were laid out before the advent of motor transport have become inadequate. Street-widening programs have been undertaken at great costs to the taxpayers. Indeed, the most economic planning of streets has become one of the major problems of city planners. The whole question of efficient planning of city areas has been made more difficult; in fact, a new urban land use—parking areas—is being created. This,

in turn, is being met partly by the building of many-storied parking garages.

But the obvious difficulties of traffic congestion are interrelated with more complicated problems of restriction of building heights, zoning, real estate finance, valuation, and taxation.

Close Relationship between Economic Problems of Land and Public Utilities

Probably the increase of motor vehicular traffic is the most important single factor in directing attention to the close relationship between land and public utility economics. The terminal sites of steam railways and the future of mass transportation by electric railways have been influenced to a great extent by the repercussions of motor transport growth on urban land utilization. It is easy, of course, to overemphasize the influence of automobile development, but it is safe to say that the difficulties and magnitude of land and public utility problems have been enhanced considerably. It will perhaps be appropriate to consider a few of these problems in greater detail.

Highways and Finance

Only in recent years have students come to realize that the automobile has become one of the major means of transport in the country. Because each unit is individually operated, there was no creation of large companies comparable to the railways, since the volume of business was in small units on the basis of the individual owner. The first common problems arising from this new medium of travel were found in the question of providing adequate highways. As better roads were laid, it became increasingly evident that up-keep cost of the motor vehicle was lowered and automobile travel increased. A marked sentiment for organized, efficient road building rapidly developed on the part of the motoring public and others benefited by the extension of America's highways.

This raised great engineering and financing problems. The United States Bureau of Public Roads and the highway departments of the different states have made such great strides in engineering research that the actual construction problems are fast disappearing. Roads are being built which will stand the ravages of weather and heavy travel at very low maintenance cost.

The question of financing is more complex. Too heavy a burden, in some instances, has been placed upon the abutting property owner, particularly where the land in question was adjacent to a main interstate or intercity highway which did not particularly serve the community in between the centers. In such cases, farms have frequently been taxed on a basis which may have been just because of the rise in land values, but actually was burdensome because the productivity of the property was not increased at the time and perhaps would not be for some time to come.

Accordingly, there has been a tendency away from the taxation of adjacent property and in the direction of the motor vehicle owner carrying an increasing burden of the highway expenditures. In states where the highways have been little developed, the usual plan is to finance the road building by long-term bond issues, to be paid for in part by the motor vehicle taxes and in part by general state and local taxes.

In 1921 special motor vehicle taxes

were equivalent to 26% of the total highway expenditures, in 1922 they equaled 31%, and in 1923 and 1924 they were equal each year to 40% of the expenditures for highways.[4] The amount raised by motor vehicle taxes considerably exceeds the total expenditure for maintenance of the highways of the nation. The motor vehicle taxes in 1924, in fact, were equivalent to 92% of the total construction and up-keep costs of the federal and state highways, not including local county highways.

The highway road-bed may be regarded as a permanent asset to the community and to some degree chargeable as a general service to the region where it is located. The surfacing of the road and the maintenance of the same are affected considerably by, and are worn out by, the motor vehicular traffic. The maintenance cost, then, is properly chargeable to the automobile. As a matter of fact, in the regions of heavy traffic where the up-keep costs of thousands of cars are lowered by the construction of good highways, there is active interest on the part of motor organizations to have the motor vehicle taxes pay a large part of the construction, as well as the maintenance cost, in order that the highway building may be pushed more rapidly.

The progress in construction of surfaced highways of the United States may be seen in Table IV.

The estimated bill for highways in 1924, according to the United States Bureau of Public Roads, was $990,683,770.

Those interested in motor transport have realized for a number of years

[4] Preliminary figures indicate that motor vehicle taxes were 48% of the total highway bill in 1925; and about 60% when personal taxes on motor vehicles are included.

TABLE IV. GROWTH IN MILEAGE OF SURFACED HIGHWAYS

Year	Total Mileage	Miles Surfaced	Percentage Surfaced
1904	2,151,379	153,530	7.14
1909	2,199,645	190,476	8.66
1914	2,445,760	257,291	10.52
1921	2,941,294	387,760	13.17
1924	2,941,294	470,000*	15.98*

*Estimated by National Automobile Chamber of Commerce.

that there was need to guard against waste in the large expenditures for highway construction. Accordingly, there have been campaigns for the establishment of state highway commissions in each state where none existed, in order that the responsibility might be centered where it could readily be held to account. A major protection of these expenditures has been the Federal Highway Act, which requires that the federal aid roads shall be located according to economic demands, and that a percentage of the funds shall be set aside for maintenance in order that the public investment may be kept unimpaired.

The present Federal Aid Highway program contemplates 178,000 miles of hard-surfaced roads, comprising a system which will pass through or be tangent to every community of 5,000 or more in the United States. About 40,000 miles of this total have been completed, and the remainder is expected to be finished within 15 years. At the same time, states are carrying on a large road development outside of the federal aid plan, so that in 10 or 15 years there will probably be around 800,000 miles of surfaced road in the United States.

Construction costs are less, maintenance expenses are lower, but the volume of motor vehicles is greater. Consequently, the financing outlook with respect to roads is cheerful. Even without increasing the rate of state taxation, the share which the motor

vehicle will bear of the highway cost will be larger each year.

What Has the Motor Car Done to Other Forms of Transportation?

This relative decrease in the burden of expenditures for highways and the increasing part of the bill paid by motor vehicle owners will prove significant in the unification of the different transport groups. The railways have, in their printed statements, frequently objected to paying taxes which went toward highway construction which, in turn, provided a road-bed for vehicles competing with them. The railways paid $331,915,000 in taxes in 1923, 12.4% of which was used for highway purposes, amounting to $34,163,000, or 3.6% of the total highway bill.[5]

It has also been pointed out that the highway is public property which can be used by the railways or any one, and, consequently, it seems logical that some share of general taxation should be devoted to these purposes. It has also been noted that the revenue which the railways receive from the freight shipments of automobile products totaled $400,981,750 in the year 1923, or more than 12 times the amount of rail taxes which went for highway expenditures.

Nevertheless, it is a fact that the railways in a great many areas have suffered from motor vehicle competition and will continue to do so in many instances. The canals took business from post roads. The railways put an end to the canals; and the motor vehicle today is bringing about a readjustment in railway travel.

People want to ride in their own machines. They also like to ride in busses. Motor trucks can deliver less-than-carload lot freight at lower expense and more rapidly than the railways can. These conditions mean that the motor vehicle is fulfilling better than any other medium certain functions which the public needs.

It will be a mistake, however, to assume that the automobile and motor truck are going to drive the railways out of business in all departments of rail activity. For long-distance passenger travel and for long-distance bulk freight, the railways render a service at a price which motor transport does not meet. But for the radial frontier, for short distances, going in any direction unlimited by rails, the motor vehicle performs a specialized rapid service which is compelling the rail routes of a generation ago to make readjustments.

The Boston and Maine Railroad, for instance, is seeking to discontinue 1,000 of its 2,450 miles of rail route, and to replace these with motor bus and motor truck service. Thirty-three different truck operations are now in effect on the Pennsylvania Railroad System. Each operation represents the substitution of trucks for a local package freight-train.

There are 51 railways in the United States and Canada which are using motor trucks as a part of their shipping service. Among these are the New York Central, the Erie, the Boston and Albany, the Baltimore and Ohio, the Big Four, the Missouri Pacific, and the Southern Railway System. There are 190 railways in North America using gasoline rail motor-coaches.

In the urban territory the electric lines are meeting competition similarly. They are taking the attitude that if the public insists on riding in motor busses, it is wiser for the electric companies to

[5] EDITORIAL NOTE: For a discussion of this problem in some detail, see T. H. MacDonald, "Commercial Vehicles on Free Highways," JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS, October, 1925, pp. 385-397.

go after that business rather than to fight it. Accordingly, today there are in operation more than 3,250 motor busses owned by electric railway companies.

The individually owned motor car and motor truck, except for short-haul distances, are complements of the railway rather than competitors. They extend the tributary territory of every railway station.

In the short-haul field, as already noted, the railway and electric companies are themselves using motor units in public service, although in general the great field of motor travel will always be that of the individually owned vehicle.

Present and Future Prospects

I have tried to indicate the status of the automobile industry and motor transport in this country. The situation today is pretty well stabilized. According to the Department of Commerce, the industry leads all others in the wholesale value of its products. The number of motor vehicles is around the 18,000,000 mark, with one passenger car for every seven persons. The manufacturers, as far as American sales are concerned, look for their market chiefly in the annual replacement of cars going out of use, in the further development of motor travel, in foreign trade, and in the normal increase in wealth and population of the country.

The story would be incomplete without noting one or two facts in the foreign field. John N. Willys, chairman of the Foreign Trade Committee of the National Automobile Chamber of Commerce, predicted, on his recent return from Europe, that American automobile factories in a few years would be shipping 25% of their products abroad. Foreign markets this year will buy more than 500,000 motor vehicles of United States design, which will probably be about one-eighth of the total domestic production.

At one time New England's clipper ships were to be seen in every port of the world, and now it is our automobiles which are coursing along the highways all over the globe.

It is possible within the confines of a magazine article to bring out only a few of the chief aspects of this subject. One might develop the topic of how the rural one-room school is giving way to the consolidated central school because it is possible to carry the children over the highways to a central point. There were 1,424 school consolidations effected during the past year. One might outline the use of automobiles by traveling salesmen, giving the figures which have been worked out by Swift and Company and other leading corporations which are using this form of transport for their representatives.

These, however, are details. The hunger for new scenes is inherent in the American people. The automobile makes this new territory available, it satisfies a pioneering desire, which is a large part of the popular appeal of the motor car. The economy of the motor truck for certain types of freight seems indisputable. Consequently, motor transport has won, and will continue to hold, a prominent place in economic life. There is all the more reason, therefore, to give serious attention to the economic problems of land and public utilities that are involved.

DEPARTMENTS

The departments of the JOURNAL are edited specifically with regard to their interest to the readers who are especially concerned with the economic problems of land and public utilities. For the most part the material for the departments will be prepared by members of the staff of the Institute for Research in Land Economics and Public Utilities.

BOOK REVIEWS

This department contains critical reviews and brief notices of new books of interest to the readers of the JOURNAL.

SUMMARIES OF RESEARCH

In this department are given brief accounts of investigations in progress and statements of tentative conclusions reached in the course of work by the staff of the Institute and others associated with the Institute's work.

COMMENTS ON LEGISLATION AND COURT DECISIONS

Here the readers of the JOURNAL will find a miscellany of summaries, interpretations, and notices of recent legislation and court decisions that have economic significance in land and public utility problems.

BOOK REVIEWS

Nash, L. R. Economics of Public Utilities. *New York: McGraw-Hill Book Company, Inc., 1925. pp. 430. $4.*

This book fills a real need in public utility literature. No other work on public utilities has been written with the emphasis on the economics of the industry and covering all of the broader business and economic problems of public utilities. Those teachers of public utility courses who have sought to emphasize the private economics of the industry rather than, or as well as, the public problems involved, will find this volume the most helpful that has yet appeared.

The author has had a wide and valuable experience in the planning, designing, and managing of public utility properties. Trained as an engineer, Mr. Nash nevertheless shows himself also a student of economics. It is very fortunate that one whose qualifications spring from such a variety of circumstances should have given in to the impulse to close a gap in the existing literature of the subject.

The electric light and power, electric railway, and gas utilities are the only classes of utilities specifically analyzed. This limitation the author explains was a practical necessity because of the wide scope of "public utility." Steam railways and the communication utilities are omitted because each of these has its own peculiar problems, and water utilities because of the dominance of public ownership.

The initial chapter of the book is devoted to a brief review of the origin and history of public utilities, in which the typical periods of development through which all the utilities pass are set forth. The second chapter is entitled "Distinguishing Characteristics of Public Utilities." In this chapter the very fundamentals of the economics of these industries are disclosed, but treated in many respects all too briefly. At this juncture, a chapter on franchises is interjected. In it the cost of service plans are given particular attention. While admitting weakness in the service cost plans, Mr. Nash believes that they offer the best available devices for stabilizing relations between the public and the utilities, to their mutual advantage.

The chapters on "Capitalization" and "Accounting" which follow are probably the least satisfactory of any part of the book. Little of significance is added in them, and many considerations of concern are entirely neglected. The chapter on accounting is particularly inadequate for teaching purposes.

Throughout the next five chapters of the book, covering the subjects of regulation, valuation, depreciation, rate of return, and rate structures, the author presents a careful and complete discussion which is a truly valuable addition to what has previously been developed. In the chapter on "Valuation," which subject the author wisely views as the problem of the rate base, the analysis and argument are broadminded and to the point. The emphasis of courts on cost of reproduction, while recognized, does not stand in the way of the author's appreciation of the greater desirability of the investment standard from many points of view. Among the elements of value, "going value" is given careful and particular attention. In the discussion of depreciation, part of which will be found in the chapter on accounting,

the author does not agree with what seems to be the predominant attitude. In the case of depreciation reserves he states in advance that the depreciation requirement is fundamentally indefinite and accurately indeterminable, and, therefore, cannot be provided for by mathematically exact accounting procedure. The rather common practice of determining the rate base by deducting the accrued depreciation at any particular time is strenuously opposed.

The chapter on the rate of return is a logical and orderly explanation of the elements to be considered in determining a fair return. Following the chapters on rate structure and taxation, which are excellent condensed statements, very usable and readable, the author has prepared a chapter on the tests of public utility securities as investments, which is an excellent corrective to the many attempts at setting up arbitrary standards for such tests. The last four chapters in the book are concerned with public ownership, public relations, and views on current utility problems of both a public and a private character.

Economics of Public Utilities is a worth-while book by a well-informed, careful student of the subject. It is the kind of book on public utilities for which there has been a need. In the matter of organization, and in some respects, emphasis, viewed as a text-book, the volume could be improved, but as it stands it is interesting and readable and, it should be noted, was not written specifically as a text-book.

HERBERT B. DORAU

Hainisch, Michael. DIE LANDFLUCHT: IHR WESEN UND IHRE BEKAEMPFUNG IM RAHMEN EINER AGRARREFORM. *Jena: Gustav Fischer, 1924.*

One of the great problems of today is the future of agriculture. We in the United States ordinarily view the problem as one of temporary depression. In Europe, however, thinking people are alarmed at the steady and continuous decline of their agricultural populations and their increasing dependence on the outside world for articles of prime necessity. The World War emphasized this aspect of the question—an aspect which is sure to loom increasingly large in this country during the next generation.

In *Die Landflucht* Dr. Michael Hainisch, president of the Austrian Republic and formerly professor at the University of Vienna, considers this problem of the rural exodus. Before evaluating the content of the book, the reviewer wishes to express his admiration for the simplicity and clarity of the style, the interesting way in which a mass of valuable historical material is handled, and the logical development of the argument.

The first chapter gives a succinct and interesting statement of the facts of the rural exodus, and an analysis of the principal alleged causes. Dr. Hainisch regards the economic cause as the fundamental one; namely, the inadequacy of rewards. He reserves till later, however, his discussion of why the rewards are inadequate. The next three chapters deal with the three reforms that are most frequently advocated—small holdings, agricultural cooperation, and garden plots for agricultural laborers. On the basis of abundant and valuable statistical and historical material the author rejects these reforms as inadequate, because they fail to attack the heart of the problem.

Dr. Hainisch sees as the heart of the problem the maladjustment of land incomes and land values, which he attributes to the presence of non-economic motives in the minds of landowners and

would-be landowners. The peasant regards land not primarily as an instrument of production, but as a home and a work-shop in which he can exploit all the members of his family. The author's picture of the life of the women and children on European peasant properties should prove illuminating to many American readers. The large landowner desires land for the social and political power it gives him. Together the large owners and the peasant owners bid up the price of land out of all proportion to the capitalized value of its income. And since they buy on margin the result is crushingly heavy fixed charges which ruin many in periods of agricultural depression, and which at all times prevent them from paying their laborers adequate wages.

There is much truth in this analysis. It overlooks, however, two very important aspects of the problem. The first of these is the element of anticipated future increases of income, which, under the influence of competition, enters very properly into present values. The second of these is the element of business management. The farmer, to a far greater extent than the business man in industry and commerce, tends to turn back any temporary increases of money income into extensions of plant, that is, into the buying of more land, and on margin, instead of increasing his equity in what he already has or building up a liquid surplus. These two factors combined go far to account for the maladjustment between land values and land income. Certainly they constitute a more complete explanation of the situation in the United States than does that of Dr. Hainisch.

To return, however, to the argument. What is the remedy for an admittedly serious situation? Dr. Hainisch is convinced that a major surgical operation is necessary. But before outlining his remedy, a pertinent paragraph from his introduction explains his point of view.

> I take as my starting point the present distribution of ownership in land, without, however, wishing to perpetuate it. I aim at preserving, as far as possible, the effectiveness of non-capitalistic motives. Sombart has described it as of the very nature of capitalism that it subordinates quality more and more to quantity. Such a situation would have the worst of consequences for agriculture. Neither the breeding of animals nor the maintenance of the fertility of the soil need necessarily pay for themselves. This is admittedly true of forestry. Wherever expenditures lead to results only after decades or even generations capitalism fails because of the compounding of interest. In the case of agriculture this leads to predatory cultivation. The permanent interests, therefore, of the community need not fall in with those of the capitalist entrepreneur, but rather with the efforts of those who strive to leave their inherited property to their children and their children's children.

To recapitulate, the evils under which agriculture is suffering today are soaring land values, overindebtedness, and, hence, inadequate returns to the owner-operator and inadequate wages to the laborer. Dr. Hainisch presents valuable figures taken from detailed monographic studies to show that estates passed by inheritance and by sale for generations prior to the nineteenth century without varying by so much as a heller from a fixed valuation. He proposes to restore this stability by legislative means. He would have the government fix land values once for all on the basis of land incomes. This process involves the determination of gross revenues and gross expenses. Among these latter, wages are a large element. Dr. Hainisch advocates that wages be established authoritatively by commissions at such levels as to stop the exodus from the land. Other costs would be measured from marginal land, on the assumption

that all the results of modern agricultural technique were being reasonably utilized. Dr. Hainisch admits that the position of the margin would be a matter of judgment, and would depend upon the extent to which the country desired to make itself independent.

After thus determining expenses, agricultural prices would be set at such a level as to enable operator-owners to pay the established wages and secure a reasonable return. Dr. Hainisch is not explicit on this point, but he would probably say that prices should be high enough to stop the exodus of operators —as distinguished from laborers—from the land.

In the last analysis, therefore, the whole program comes down to price-fixing. The level of prices would determine the amount of net land income, which would vary henceforth only as the government deemed desirable. Operators of unusual ability would secure additional revenues, but such differentials would be distinctly profits and not rent, and would not affect land values. Land values would remain comparatively stable. In fact, they would have lost their significance. A purchaser of land would look to the income only (at least this appears to be Dr. Hainisch's supposition) and this income would resemble interest rather than rent.

Dr. Hainisch envisages, as a result of his proposal, a lowering and a stabilization of land values. It is safe to predict, however, that any bill drafted on these lines would not have the slightest chance of passage, unless it accepted existing values as a starting point. Thus, in effect, the measure approaches, in result though not in purpose, that sponsored by John Stuart Mill years ago—the taxation of future increases of land values. The proposed administrative machinery, however, is entirely different. Mill advocated using the existing tax machinery. Hainisch wishes to establish new and complicated machinery. In addition to the price-fixing commissions already mentioned, he proposes to establish a "monopoly" similar to the "tobacco monopoly," which would enjoy the sole right to buy and sell grain and live stock, products in which Austria is markedly deficient and which would alone come under control. The "monopoly" would buy domestic grain at the established price and foreign grain at the lower world price. The whole would be sold at an intermediate price sufficient to cover costs. Thus, the argument goes, the burden on the consumer would be less than if a heavy duty were laid on foreign grain and the result would be less likely to redound to the benefit of present landowners in the shape of higher land values.

Such, in short, is President Hainisch's program. To the reviewer it appears at once chimerical and undesirable. It is chimerical because it runs athwart the prejudices and preconceptions of the most conservative class in European politics—the peasantry. It is undesirable, even assuming effective administration, because it is predicated upon narrowly national lines and upon a situation which is passing. The era of cheap and fertile land is nearing its end. More intensive agriculture is clearly coming where it has not already arrived. The new situation will bring about the gradual recovery of European agriculture, just as the continuous opening of new lands to the plow brought about its decline throughout the nineteenth century. Meanwhile, the increasing devotion of the principal European countries to industry is far from being a sacrifice of national advantage.

John V. Van Sickle

SUMMARIES OF RESEARCH

PUBLIC UTILITY FINANCING DURING THIRD QUARTER, 1925

ANALYSIS of new public utility securities issued during the third quarter of 1925 shows that the remarkable volume in which public utility securities were issued during the year 1924 is being maintained thus far during the present year (Table I). The index for the third quarter is 170 compared with 168 and 299 for the second and first quarters of 1925. The carefully gathered reports of the *Commercial and Financial Chronicle* show the volume for the first 9 months of 1925 to be $1,311,833,247, compared with $1,181,434,112 during the same period of 1924. It is particularly noticeable that financing was at the low average rate of 5.53% per dollar of new securities issued during this period.[1] The average yield at offering price per issue in these same three months was 5.77% (Table II). Excluding debentures and certificates from the total, it is found that bonds and notes only were issued at an average yield per dollar of 5.45%, the lowest point reached in the steady

[1] For the simple and weighted average yields, by quarters, from 1919 to 1925, see the JOURNAL OF LAND & PUBLIC UTILITY ECONOMICS, October, 1925, p. 500.

TABLE I. INDEX NUMBERS OF VOLUME OF PUBLIC UTILITY FINANCING, 1919-1925*

	1919	1920	1921	1922	1923	1924	1925
By Months							
January	100	67	55	46	122	112	199
February	48	28	25	47	66	89	172
March	25	27	25	43	94	78	144
April	5	38	25	50	64	112	69
May	15	38	35	150	66	233	103
June	26	20	9	96	92	122	118
July	41	25	115	44	21	104	90
August	20	11	33	22	40	62	93
September	54	44	34	147	34	77	110
October	24	33	33	77	59	112	92
November	8	21	119	43	161	69	...
December	20	63	53	54	135	111	...
By Quarters							
First Quarter	100	71	61	80	164	162	299
Second Quarter	27	56	41	172	129	271	168
Third Quarter	67	47	105	123	55	141	170
Fourth Quarter	30	68	119	101	206	169	...
By Years	100	107	145	212	246	330	...

* Volume for January, 1919, first quarter, 1919, and year 1919 used as basis for computing index numbers for months, quarters, and years, respectively. Compiled from the records of the *Commercial and Financial Chronicle*.

TABLE II. WEIGHTED AND SIMPLE AVERAGE YIELD AT OFFERING PRICE OF NEW PUBLIC UTILITY SECURITY ISSUES FOR 9 MONTHS OF 1925

	First Quarter	Second Quarter	Third Quarter
All Maturities			
Simple Average	5.81	5.87	5.77
Weighted Average	5.49	5.72	5.53
Long-Term			
Simple Average	5.82	5.86	5.77
Weighted Average	5.67	5.74	5.50
Short-Term*			
Simple Average	5.77	5.94	5.73
Weighted Average	5.32	5.58	5.68
Bonds and Notes only			
Simple Average	5.79	5.82	5.76
Weighted Average	5.48	5.65	5.45

* Short Term—Maturities from 1-5 years inclusive.

improvement which has taken place in the price at which public utilities are obtaining capital. This represents a considerable decline in the average yield at offering price of new public utility security issues over that of the second quarter of the year, 1925, when the average yield at which new issues sold was 5.72% per dollar and 5.87% per issue.

Further analysis of public utility financing during the first 9 months of 1925 shows that 86% of the volume reported issued was for new capital and only 14% for refunding purposes. Stock issues accounted for 30% of the total par value, while long-term bonds and notes represented 60% and short-term borrowing only 10%.

HERBERT B. DORAU

COMMENTS ON LEGISLATION AND COURT DECISIONS

THE MISSISSIPPI INCOME TAX DECISION

AMONG some ten new state income taxes enacted in the five-year period following the war, the mortality rate at the hands of voters and the courts has been less than might have been anticipated in view of the quantity of legislation. The New Mexico statute of 1919[1] had but a short life; and the Oregon income tax of 1923,[2] after being sustained in a referendum election in the autumn of that year, was defeated by initiative petition in 1924. At last inquiry it had been re-enacted by the legislature for a period long enough to enable the state to collect unpaid taxes due under the act.

The Alabama act of 1919[3] was annulled by the state supreme court,[4] on grounds that will be referred to later. In Arkansas, the so-called Riggs Income Tax Law,[5] levying "a sale or gross income tax" of one-tenth of 1% on the incomes of individuals and partnerships, was held by the state supreme court to be an occupation tax, and as such invalid, because the state could not, under the constitution, tax "occupations that are of common right."[6]

The South Carolina statute (1922),[7] through its wholesale adoption of the Federal Income Tax and the regulations of the Internal Revenue Department (the tax rate being defined as one-third "of the amount required to be paid to the United States Government"), appeared to offer a particularly inviting target for legal attack. It was immediately subjected to a broadside of arguments before the court, on the grounds that its terms were so indefinite as to be nugatory; that it violated the "due process," "equal protection," and interstate commerce clauses of the Federal Constitution; that it involved at least two delegations of legislative power—one to the Tax Commission, in the administrative powers conferred, and one to the Federal Congress, in the blanket adoption of any regulations that might be enacted with reference to the Federal Income Tax; and that the state constitutional requirement of three "readings" in each house had not been complied with, since the whole federal act and regulations had not been read. The state supreme court held against all of these contentions and sustained the statute.[8]

The most recent case involves the Mississippi statute of 1924. Since the grounds of attack were somewhat similar to those in the Alabama case cited above, it will be of interest to recall briefly the terms of the Alabama case.

In general, the Alabama court held that a tax on income is a tax on property, and that consequently the Alabama statute violated the constitutional provision limiting state levies to not more

[1] Chapter 123, repealed February 26, 1921; *Laws of 1921*, Chapter 17.

[2] *Laws of 1923*, Chapter 279.

[3] *General Acts of 1919*, pages 374-395.

[4] *Eliasberg Bros. Mercantile Co.* v. *Grimes*, 204 Alabama 492.

[5] *General Acts of 1923*, No. 345.

[6] 271 S. W. 720.

[7] *Acts of 1922*, No. 502.

[8] *Santee Mills* v. *Query*, 115 S. E. 202 (June 17, 1922).

than 65/100 of 1% of the value of taxable property. The court quoted the Massachusetts opinion of 1915[9] to the effect that, "A tax upon the income of property is in reality a tax upon the property itself. Income derived from property is also property"; and in the course of a decision containing some remarkable reasoning continued:

> Money or any other thing of value, acquired as gain or profit from capital or labor, is property; in the aggregate these acquisitions constitute income; and, in accordance with the axiom that the whole includes all of its parts, income includes property and nothing but property, and, therefore, is itself property . . . . money, when received as income, is visible, tangible, concrete, and that, in its last analysis, is what is taxed. Nor is it of any consequence that the money thus taxed has left the hands of its quondam owner, however speedily. . . . It must, therefore, be held to be a direct imposition upon "property" as such. . . .

It will be observed that the Alabama court goes much further than the Massachusetts opinion or the decision of the United States Supreme Court in 1895, in basing its judgment, not on the fact that income from property is the essential attribute of property and in that sense identical with it, but on the ground that income *consists* of "money" or something else of value and, therefore, in its own nature *is* property. The Alabama decision would hold even income derived entirely from personal services to be property and its taxation governed by the rules that apply to property taxation in general. The monetary theory of the Alabama court recalls that of the United States Supreme Court many years ago, in a case in which a Michigan gross receipts tax was held unconstitutional on the ground, in part, that *"the money,"* which the court identified with gross receipts, *"probably never was within the state."*[10]

The Mississippi statute[11] levied a general net income tax, with rates graduated from 1% to 5%. It was attacked[12] on the grounds (1) that in taxing the income from property it was equivalent to a property tax, (2) that it violated the equality requirement of the state constitution and the "equal protection" clause of the 14th Amendment, and (3) that it imposed a burden upon interstate commerce.

The state supreme court ruled:

1. A tax on income is not a tax on property, since it is levied not with reference to the fact of ownership but with reference to the receipt of income, and since "property itself alone cannot produce income," except in connection with labor or personality. *Pollock* v. *Farmers' Trust Co.*[13] is referred to, and "the error therein" and in other similar decisions is declared to be due to "referring the income or gain from" the property to the property alone.

2. The equality requirement does not forbid "reasonable" classification of the objects of taxation or necessary differences in methods of assessment and administration.

3. On the question of interference with interstate commerce, the court admitted that, "if the tax were on gross income, a serious question would be here presented"; but taxes on net income, derived in part from interstate commerce, have been repeatedly upheld by the United States Supreme Court.

The constitutionality of the statute was therefore upheld—but by a divided

[9] Opinion of the Justices, 220 Mass. 613.

[10] *Fargo* v. *Michigan*, 121 U. S. 230 (1887).

[11] *Laws of 1924*, Chapter 132.

[12] *State ex. rel. Knox, Atty. Gen.* v. *Gulf, Mobile & N. R. Co.*, 104 S. 689 (June 1, 1925).

[13] 157 U. S. 429.

court. Justice Holden, while concurring in the decision, asserted, nevertheless, that the element of graduation in the rates "is obnoxious to my sense of equal and just taxation."

Justices Anderson and McGowan dissented vigorously, on the ground, in part, that "the right to acquire, own, and enjoy real and personal property is a natural right. . . . The legislature can neither take it away nor materially impair it." Justice Anderson quotes the Alabama decision approvingly and continues with picturesque expressiveness:

> Good-bye Section 112, this is the last of you. The framers of our Constitution by your adoption thought they were affording the taxpayers of the state some security against unjust and unequal taxation. They were mistaken. Little by little you have been whittled away by the courts. . . . Now by giving each scheme of taxation a new name, property may be taxed times without number. It is all in the name. The state now, without let or hindrance from the Constitution, may fill its insatiate tax maw to overflowing.

From conversation with members of the Mississippi legislature and others, the writer gathers that there is a sharp alinement of opinion with regard to the income tax throughout the state and that there will be a determined effort to repeal or amend materially the present statute. In fact, a proposed constitutional amendment specifically authorizing income taxation, but including at the same time a variety of other provisions, has been defeated by the voters of the state since the enactment of the statute itself. The recent decision, putting beyond question the power of the legislature, under the present constitution, to levy a classified and graduated income tax, should clarify the issue.

It is to be hoped that it will likewise put us further along the road toward judicial recognition of a clear distinction between property and income for purposes of taxation. The tendency in the United States to draw as many things as possible within the protective category of property has in the past embraced a wide range of subjects, and its manifestation in the field of taxation is therefore natural and understandable.

But the pitfalls that abound, where the concept of property is pushed to a too attenuated extreme, are illustrated by the dilemma that confronted the Massachusetts court in a recent case, *American Manufacturing Company* v. *Commonwealth*.[14] The question before the court was whether merchandise of the plaintiff situated in New York was "subject to taxation" in that state, and therefore deductible from the corporate excess in Massachusetts. The court had said that the New York franchise tax was "in substance, tendency, and practical operation, a tax upon the income itself," and had also quoted its own previous opinion that, "A tax upon the income of property is in reality a tax upon the property itself." Starting with these premises, the conclusion would seem to be inescapable that the plaintiff, having paid the New York franchise tax, had thereby paid a *property* tax on its *property* in New York.

How does the court escape the dilemma? By frankly abandoning its own premises, with the simple statement that "The franchise tax . . . . is too remote from the income of its merchandise situated in New York to permit the conclusion that the merchandise is there 'subject to taxation.' " This is a plain, reasonable statement; but a premise that must be abandoned in a dilemma, it would seem, might better be abandoned beforehand, as the Mississippi court has done.

H. D. Simpson

[14] 146 N. E. 801 (1925).

Statement of the Ownership, Management, Circulation, etc. Required by the Act of Congress of August 24, 1912, of *THE JOURNAL OF LAND AND PUBLIC UTILITY ECONOMICS, published quarterly at Chicago, Ill., for October 1, 1925.*

State of Illinois, County of Cook, ss.

Before me, a notary public in and for the State and County aforesaid, personally appeared Thos. S. Rockwell, who, having been duly sworn according to law, deposes and says that he is the Business Manager of *THE JOURNAL OF LAND AND PUBLIC UTILITY ECONOMICS*, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:

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Publisher—A. W. Shaw Company	Cass, Huron & Erie Sts., Chicago
Editor—Richard T. Ely	Northwestern University, Evanston, Ill.
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2. That the owners are: [Give names and addresses of individual owners, or, if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.] The Institute for Research in Land Economics and and Public Utilities, Northwestern University, Evanston, Ill.; Albert Shaw, Pres., Board of Trustees, New York City; Henry C. Taylor, Secy., Board of Trustees, Northwestern University, Evanston, Ill.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: [If there are none, so state.] None.

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[*Signed*] THOMAS S ROCKWELL, Business Manager. [SEAL] Sworn to and subscribed before me this 24th day of September, 1925. A. S. ENDICOTT, Notary Public. [My commission expires May 24, 1928.]